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A JOINT PUBLICATION OF THE SOUTHERN ECONOMIC ASSOCIATION AND THE UNIVERSITY OF NORTH CAROLINA

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The SOUTHERN ECONOMIC JOURNAL

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THE QUANTITY INDEX AND THE ELASTICITY OF DEMAND FOR OUTPUT

W. A. L. COULBORN

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In his recent work, *A Reconstruction of Economics*, that brilliant and stimulating book, Prof. Boulding writes:[1]

> Classification according to elasticities is particularly important in constructing supply and demand functions relating aggregates of output, sales, purchases or consumption to price levels of these aggregates. If these aggregates consist of commodities with widely different individual demand or supply elasticities the aggregate supply or demand curve may be almost meaningless, for consistent with a given price level of the aggregate there may be a wide range of possible values of the quantity level, depending on the *composition* of the price level. Thus suppose that we have an aggregate consisting of commodity *A*, which has an elastic demand, and commodity *B*, which has an inelastic demand. A rise in the price of *A* coupled with a fall in the price of *B* may leave the price *level* unchanged: it will, however, diminish the purchases of *A* very substantially and increase the purchases of *B* very little, because of the differing elasticities of demand, and hence the index of quantities purchased may decline even though the price level remains unchanged. Exactly similar considerations apply to supply. It is possible to draw aggregate supply and demand curves, therefore, only when the commodities aggregated have approximately the same elasticities of demand and supply. For this reason aggregate demand and supply curves which include very large groups of commodities, and even more, aggregate demand and supply curves which attempt to cover the whole of output are very unreliable and dangerous weapons of analysis.

In his example it is evident that Prof. Boulding is assuming the demand functions of *A* and of *B* to remain unchanged during the lapse of time which is implied.

It is the purpose of this article to examine some of the implications of this important statement for the concept of total demand (total supply being outside the present consideration); to make tentative suggestions as to the practical significance of Prof. Boulding's example; and to inquire whether it is defensible after this powerful onslaught still to employ the elasticity of demand for output as a device contributing in a minor degree to the understanding of economic fluctuations.

I

In the first place there can be no question of assailing Prof. Boulding's argument: his example is indeed self-evidently valid. Rather is it desirable, since

[1] K. E. Boulding, *A Reconstrutcion of Economics*, pp. 203–4.

this will facilitate later exposition, to set forth, for two consecutive periods of time in which the individual demand functions remain unchanged, an arbitrary arithmetical specimen of Prof. Boulding's case. Thus let the figures of the first period be as follows:

	q_1	p_1	e_1	E_1	P_1
A	40	\$2	\$80	\$140	\$11/7,
B	60	\$1	\$60		

where q_1 stands for the physical quantities; p_1 for the individual prices; e_1 for the individual expenditures; E_1 for total expenditure; and where P_1 is calculated as $\frac{\Sigma p_1 w_1}{\Sigma w_1}$, the relative expenditures serving as the weights. As to the second period, let it be assumed that ${}_Ap_2$ rises to \$2½ and that ${}_Aq_2$ falls to 16: that is, a 25% rise of price causes a 60% fall in the quantity demanded; which certainly fulfills Prof. Boulding's postulate that the demand for A be elastic. Then all the other figures become calculable if $P_2 = P_1$; for ${}_Ae_2 = \$40$ and it must be assumed that ${}_Be_2 = \$30$. This is so because price levels are in question, and if ${}_Aq_1/{}_Aq_2 \neq {}_Bq_1/{}_Bq_2$, then it must be that ${}_Ae_1/{}_Ae_2 = {}_Be_1/{}_Be_2$; otherwise there would exist no basis of comparison between P_2 and P_1; indeed it would be meaningless to use the expression "price level" at all. If the price levels of two periods are commensurable at all, either the quantities or the expenditures must be similar, in the sense of bearing the same ratio to each other at different times. If neither of these ratios is the same, whereas rough comparison may be still worth while, the comparison belongs strictly to the same class as "Pharaoh's slaves against Fifth Avenue's motor-cars."[2] Thus since $P_2 = \frac{\Sigma p_2 w_2}{\Sigma w_2} = \frac{2\frac{1}{2} \times 4 + {}_Bp_2 \times 3}{7}$, and since $P_2 = P_1 = \$11/7$, therefore ${}_Bp_2 = \$1/3$; and the schedule for the second period is complete:

	q_2	p_2	e_2	E_2	P_2
A	16	\$2½	\$40	\$70	\$11/7.
B	90	\$⅓	\$30		

In this case a fall in the price of B by 66⅔% causes an increase in the quantity demanded of only 50%, so that Prof. Boulding's second postulate as to elasticity is fulfilled also. The figures chosen are no doubt somewhat extreme, involving a pursuit of the elasticities over considerable lengths of the demand curves, but a fall is to be observed of no less than 50% in the quantity index,[3] and the same of course in total expenditure.

In relation to the simple theory of index numbers, there are at least two difficulties in Prof. Boulding's case. The first relates to a well known conundrum. Let it be supposed that A + B comprise the contents of the housewife's weekly shopping basket. There is of course no way of aggregating the quantities of the items themselves, which are, as Keynes said of output, "a non-homogeneous

[2] J. M. Keynes, *A Treatise on Money*, p. 104.

[3] $Q_1 = E_1/P_1 = 140 \times 7/11$, whereas $Q_2 = E_2/P_2 = 70 \times 7/11$.

complex."[4] There remain, however, the monetary terms. Now the nature of the index number requires stable relative expenditures. Thus the housewife will spend in her normal proportions on the different items, coming home with $4 worth of A and $3 worth of B; but there will be no knowing what physical quantities she will bring back to her family. It will be as though all her purchases, like Alice in Wonderland, had been nibbling since last week at one or the other side of the mushroom. In other words a price index, constructed on the basis of similar relative expenditures, does require a considerable degree of stability in relative individual prices, which is to say in relative individual quantities also, if it is to have practical significance.

This contention evidently does not dispose of Prof. Boulding's case: it is not suggested that he employed an 'unearthly' price level in order to attack the total demand curves to which he objects; but the contention does imply that existing relative expenditures are not likely to persist if the individual price movements which he postulates are great. Thus the foregoing arithmetical specimen may be thought unrealistic. It is clear too that extreme variations in total expenditure, such as the one shown by the above arbitrary figures, may be due also to causes other than the 'unfavorable' movements of individual prices, 'unfavorable' having here the sense of that which diminishes total expenditure.

Moreover, if it were postulated rashly, despite Prof. Boulding's warning, that A + B should stand for total output, then the second difficulty also would arise. E_1 would be the total expenditure of the first period, and E_2 that of the second. But expenditure is the source of income; thus the specimen figures would relate to a community whose income was halved. Now it is of course the role of price index numbers to be used as an indication of the purchasing power of money for similar persons in different circumstances of place or time. But would this community be similar to itself in the earlier period with half of its former income and the price level unchanged? Again there emerges the conclusion that there must be quantitative limits to the practical significance of Prof. Boulding's case.

Moreover, whilst it is clear that his case ($P_2 = P_1$; $Q_2 < Q_1$; $E_2 < E_1$) is theoretically inexpugnable, none the less the following considerations may be thought to show that certain conceptual difficulties are inherent in it. For, if knowledge of the demand curves of A and of B may be assumed, as is implied in Prof. Boulding's example, these being taken as before to be unvarying over the two periods of time in question, then it would seem reasonable to suppose that the demand curve for A + B could be assumed also. To revert to the figures of the arithmetical specimen relating to the first period of time, a quantity scale common to A and to B could be constructed so that the same distance represented 40 of A and 60 of B: then it would seem that a simple vertical addition of the two demand curves could be made. Thus again the resulting demand curve for A + B might be thought to have the characteristics of a demand curve for output. But the demand for A + B is not stable in its quantitative composition: that is to say, this "output" is that strange amalgam, $4 worth of A plus

[4] J. M. Keynes, *The General Theory of Employment, Interest and Money*, p. 38.

$3 worth of B, and, since their prices are assumed to vary, the physical content of "output" will vary accordingly. Thus whereas the demand curves for A and for B remain unchanged throughout the two periods, the demand curve for A + B in the first period is not that which belongs to the second; for in the second period the scale of quantity should be drawn so that 16 of A corresponds with 90 of B. Furthermore the price movements postulated by Prof. Boulding were unfavorable (in the sense given) by reason of the differing elasticities of A and of B; but the price level of A + B is unchanged, so that the elasticity of the demand curve for A + B, even if it could be drawn to apply to both periods, would not be a determinant of the change in expenditure. It will be seen that these paradoxical elements are inherent in the specimen of Prof. Boulding's case because only the relative expenditures could be used as weights.

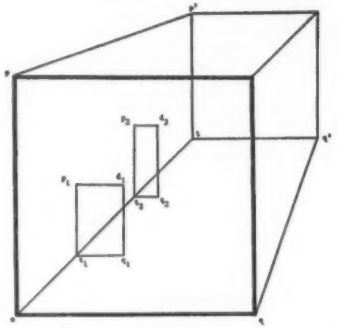

FIG. 1

The argument now permits a threefold suggestion to be put forward:

(1) that changes in total expenditure may be due to changes in Q, interpreted here as the quantity index of total output per period of time;
(2) that changes in total expenditure may be brought about also by the elasticity of demand for output, supposing a change of price level, and, as will be elaborated below, by changes in that elasticity; and
(3) that the demand function for output is "unreliable and dangerous" *only* if the assumption is made that Q is a constant: indeed this is perhaps no more than a restatement of Prof. Boulding's warning.

The first part of the suggestion, being itself a simple matter, may be given the following very simple geometrical illustration. In Figure 1, the price level is measured in the plane opp′t, and the quantity level or index in the plane oqq′t, time being shown on the axis ot. It would be possible of course to show demand curves for output (the axes t_1p_1 and t_1q_1, as also t_2p_2 and t_2q_2, being extended for the purpose) passing respectively through the points of effective demand d_1 and d_2, though such demand curves would not bear similar relationships to the axes of price and quantity. If t_2p_2 were not equal to t_1p_1, the elasticity of the demand curve through d_1 would affect expenditure in the second period. But

such demand curves are not shown since they would be irrelevant to the proposition illustrated in Figure 1. For it is the sense of Prof. Boulding's case, if it may be applied to output, to warn us that t_2q_2 may be less than t_1q_1 whereas $t_2p_2 = t_1p_1$; so that E_2, shown by the area $t_2p_2d_2q_2$, is different from, and in this case less than, E_1, shown by $t_1p_1d_1q_1$, although the price level is unchanged.

II

Before proceeding further it is proper to attempt an estimate in the light of general considerations, exact statistical knowledge being unavailable, of the practical importance of Prof. Boulding's case ($P_2 = P_1$; $Q_2 < Q_1$; $E_2 < E_1$). Indeed the analysis has suggested already that great movements of the quantity index are unlikely to occur while the price index remains unchanged; but it must be admitted that what are for practical purposes "great movements" are quite vague; so that the importance of Prof. Boulding's case cannot be circumscribed precisely by reference to them.

But it is clear in relation to the demand functions for A and for B (still assumed to be stable over time), if these may be represented by demand curves stretching all the way from the axis of price to that of quantity, that neither of them can be elastic nor inelastic throughout its entire length: that is to say that the unfavorable change (in the sense defined above) in expenditure cannot result at all prices of A and B. Moreover, it is worth noting that, if the price of A has gone up once and that of B down once, there is, so to speak, less room left on the demand curves for the same thing to happen again. Thus a fall in expenditure might occur once or twice, depending on the time intervals chosen, perhaps three times, from Prof. Boulding's conditions; but such a fall is unlikely to continue to occur for an indefinitely long period of time. It may be thought indeed that a fall of this kind could not go on for two or three years on end.

Another aspect of the same proposition may be taken into account. The data include changes in the prices of A and of B while given conditions of demand prevail. Thus long term supply functions for A and for B cannot be in question. It follows that the price changes must derive from original changes on the side of supply: these *must* take place, since short term supply curves do not slope downwards to the right, although it is possible of course in actual experience for original changes in demand to take place simultaneously (a possibility excluded for the purposes of this discussion by the assumption of individual demand functions unchanged over time). But if changes in the supply of A and of B cause, or contribute to cause, falls in the expenditure on A and on B, is it to be supposed that the suppliers of A and of B survey such changes unmoved? So far as concerns B, for which the demand is inelastic, it is submitted that, even in long term time, suppliers will take preventive action of one kind or another if the fall in expenditure is great. In conditions approximating those of perfect competition the "preventive action" will take the form of failure on the part of the least efficient producers or of their voluntary withdrawal from the supplying of B; either of which will cause a reaction in supply and in price. In conditions of imperfect competition on the other hand agreements tantamount

to restriction of sales will cause also a reaction in supply and price. As to A, for which the demand is elastic, preventive action by suppliers may be expected again. Their condition is one in which they have curtailed, by choice or of necessity, the supply; and the result has been a fall in their receipts. It is possible of course that their costs may have decreased by a greater margin so that their profits have advanced as a result of the change. But all the economies of large scale production argue against such a conjunction. Indeed, if the fall in receipts (or expenditure) is great, it is difficult to believe that the spreading of overheads over a smaller output can result, particularly in an expanding economy, in greater profits. It may appear that such a change would not be *typically* agreeable to suppliers; wherefore they would feel an incentive to increase supply so as to take advantage of the conditions of elastic demand. Thus it may be felt that these inquiries indicate a limited importance on the scale of time for Prof. Boulding's case.

A more fundamental question should be asked also. How frequently is the condition $P_2 = P_1$ likely to be fulfilled when these terms are interpreted as price levels of output? In the world of experience, as is well known, *all* the quantities alter more or less rapidly all the time: the series q_2 is never equal exactly to the series q_1, nor are they precisely similar in the sense given; the same is true as between the series e_2 and e_1 and between the series p_2 and p_1. Thus, even making the valiant assumption over time that the cigarettes of last year are indistinguishable from those of this, that bread remains bread, that an automobile is always what was meant by an automobile last time, etc. etc., the price level of output can be at best only a vague concept. The output is never quantitatively, nor in its composition, precisely the same.

Yet the changes in the nature of output, of which a change in the quantity index is a particular species, may still be slow compared with changes in its price level, for all the theoretical vagueness and the practical difficulties inherent in the latter concept. If that is so, the elasticity of the demand for output will be a more important determinant of later expenditure than a change in the quantity index will be. Indeed, economies have been seen to pass at least from boom to depression somewhat rapidly. It does seem reasonable therefore to think of the demand for output as a whole as being at least sometimes highly unstable, and to suppose that its elasticity is thus an important determinant. Such an elasticity is of course a blunt and imperfect tool of understanding; but yet it may be valuable as bearing sufficient resemblance to a real and powerful source of change. After all, the price level of output is just such another blunt and imperfect tool, but it is one which hardly could be foregone.

The last inquiry of this section relates to a matter suggested by Prof. Boulding's example, namely the static division of economic goods into two classes, the one having an elastic and the other an inelastic demand function. There is abundant evidence, of course, that agricultural staples have chronically an inelastic demand;[5] whereas some luxuries, notably novelties, have at least usually

[5] That is to say, of course (dispensing with the assumption of individual demand curves unvarying over a period of time) that, as one demand curve for agricultural staples re-

an elastic demand. But it is suggested that there are many other goods also, quantitatively important, which are over a period of time migrants, so to speak, across the border of unit elasticity, so that they are at one time A goods and at another time B's. If this is so, there exists the possibility that the 'migration' may be for expenditure a more important determinant than is a change in the quantity index.

III

In this final section it may be well to inquire briefly into the historical environment of ideas concerning the elasticity of demand for output. Perhaps the most influential early statement was that of Jean-Baptiste Say, who wrote: "It is observable, moreover, that precisely at the same time that one commodity makes a loss, another is making excessive profit."[6] The idea was not entirely new;[7] and it may well be unfair to attribute to Say the statement, unsupported by any reference to time, that total demand must be equal to total supply. That is indeed the general tenor of his famous *théorie des débouchés*, and the interpretation which the classical school placed unhesitatingly upon Say's proposition.[8] Yet it should be said in defence of Say that at least he attempted, as many of his followers did not, to grasp the element of time and to incorporate it in his theory. Today there would be no doubt agreement that the proposition, total demand = total supply, is ambiguous; that if there is added the phrase "in any period of time," the proposition is either false or true only by an exceptional coincidence; and that sense can be made of Say's Law only by contending that there is a total demand to which the total supply of any period of time is equal, but that this demand and this supply are not contemporaneous, the demand being anterior (fundamentally because production takes time). The final overthrow of Say's *théorie des débouchés* in its ambiguous traditional interpretation is perhaps one of the greatest debts owed to Keynes.[9]

Yet if Say was never so crude as his simpler followers, nor had reason to employ the evasiveness of his later ones, it remains true that he supposed the elasticity of demand for output (to use modern terms) always to be equal to one. It is quite clear from the rest of his chapter XV (*op. cit.*) that he thought all losses to be offset by "excessive profit": his proposition quoted above was intended evidently to be unreservedly general in its application, relating either to

places the preceding one with the passage of time, nevertheless the characteristic of inelasticity persists.

[6] Jean-Baptiste Say, *A Treatise on Political Economy* (translation of the fourth edition by C. R. Prinsep), 1859, Book I, Chapter XV, p. 133.

[7] "There is perhaps in all this *Théorie des Débouchés* nothing very original. The essence of the doctrine can be found, for instance, in Quesnay's *Dialogue du Commerce*, where he says categorically: 'que tout achat est vente, et que toute vente est achat', . . . " Alexander Gray, *The Development of Economic Doctrine*, pp. 269–70.

[8] See for example such a recent authority as Charles Gide, *Principes d'économie politique*, vingt-sixième édition, 1931, livre premier, deuxième partie, chapitre 1, IV.

[9] J. M. Keynes, *The General Theory of Employment, Interest and Money*, Chapter 3, Section 1.

a closed or to an open economy and for any period of time. What Say's followers did therefore was to suppose that the elasticity of demand for output was always equal to unity, and to draw the conclusion, neglecting Prof. Boulding's case, that expenditure must be a constant: hence the long period in which business cycle theory was in the hands of the unorthodox.[10]

Since expenditure on output is certainly not a constant, therefore, one way of considering the matter is to think that the fluctuation, whether cyclical or sporadic, must be due to a fluctuation of the quantity index or to the elasticity of the demand for output.

At this point it may be permissible, and not entirely fanciful, to desert the traditional terms, elastic and inelastic, in favor of hybrid terms. For it may be possible to detect in experience a moment so favorable to greater expenditure that that would have followed whether the price level had gone up or down. But evidently this means that the demand for output was inelastic upwards from the

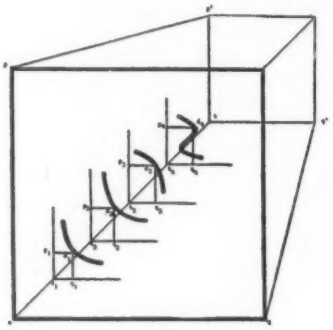

FIG. 2

point of effective demand and elastic downwards therefrom. This may be called optimal elasticity. This is a happy condition if there is at the time a large amount of the factors of production unemployed in the community, happy in the first place from the point of view of producers, and happy at later removes for the rest of the community. If there were overfull employment, however, optimal elasticity of demand would lead only to inflation or to further inflation. But it must be recognized that a state of optimal elasticity of demand together with unemployment is not one in which improvement must result: Prof. Boulding's

[10] The following opinions are relevant:

". . . the early Classicists. . . . To most of them, Say's Law seemed to absolve the economist from the need of devoting much attention to 'trade revulsions'." Lewis H. Haney, *History of Economic Thought*, Fourth Edition, 1949, p. 669.

" The problem is that of deriving a theory of a general disturbance from presuppositions according to which such a disturbance is rendered impossible by the regulatory mechanism of the economic system. . . .

" . . . For Gossen, Walras, Menger and Clark the problem does not exist; . . . " Eduard Heimann, *History of Economic Doctrines*, p. 220.

quantity index can still play the serpent in this optimal Eden. Yet it may be felt that the earlier argument has shown his quantity index to be not a very powerful serpent, whose blandishments are likely to be overborne by the optimal condition of demand. Thus it might be proper in analyzing particular cases to treat separately the quantity index effects; and perhaps in some circumstances to disregard them.

At the other extreme there may be defined a condition of pessimal elasticity of demand, in which a movement of the price level in either direction causes a fall in expenditure. The demand for output is thus elastic upwards and inelastic downwards from the point of effective demand. And this brings the argument to its point: it may be correct to think of periods of recovery as characterized by optimal elasticity, and of periods of boom as having pessimal elasticity. At a point of crisis indeed something worse than pessimal elasticity would seem to prevail: for in modern conditions, in which a conscious groping takes place to identify the moment of crisis, a clear fall of the price level may bring about that despairing frame of mind in which buyers are willing over a certain range of price to take *less* as the price falls; since the further the price falls within that range the more certain it may be thought that the moment of great recession is at hand. Thus there would be at the moment of crisis, applying the crisis psychology to the whole of output, what might be called a 'kink' or an 'undermining' in the demand curve for output.

In relation to axes of price, quantity and time (as before), the changing elasticity of demand for output may be illustrated therefore by the heavy curved lines in Figure 2. The areas $t_1p_1d_1q_1$, $t_2p_2d_2q_2$, etc., represent the expenditures respectively of the periods ot_1, t_1t_2, etc. Both the price index and the quantity index are shown to increase as time passes and the community becomes more prosperous. Thus the first figure may be thought to illustrate a condition of recovery; the second a moment when prosperity has begun; the third an unstable condition of boom; and the fourth a moment of crisis, with the demand curve for output showing the 'kink' or 'undermining'; and the movement of the demand curve from crisis back to recovery could be shown very simply in similar fashion. It is not suggested of course that the intervals on the axis of time correspond with any historical fluctuation of a given economy. Restating the conditions shown in Figure 2, for ot_1 elasticity was optimal, and continued to be so until t_2; but between t_2 and t_3 it became pessimal. It is suggested that the crisis distortion of the demand curve for output might be a phenomenon succeeding very rapidly after the pessimal shape had come into being; and perhaps also a phenomenon which must follow inevitably the arrival of the pessimal condition.

Such a geometrical illustration as that of Figure 2 serves, if acceptable, only as a piece of mental shorthand of course. The fundamental reasons bringing about the change of elasticity are not revealed. But the movement of expenditure and the proximate reasons for that are made perhaps a little easier to comprehend.

THE EQUALITY AND INEQUALITY OF SAVING AND INVESTMENT

WILLIAM L. MILLER

Alabama Polytechnic Institute

I

The discussion of saving and investment has followed two patterns. The classical economists and many since their time have reasoned that the volume of saving and investment does not influence the current level of real income and that the future real income will be influenced only by the productivity of the economy which in large measure is a function of the accumulation of capital. During the current century economists have increasingly realized that the volume of saving and investment does influence the level of real income in other ways in addition to its effect upon the accumulation of capital and that, assuming a given resource pattern, a given state of technological knowledge, and a given disposition to save, capital accumulation depends upon the fulness of employment. Out of the consideration of the interrelation between the level of income and the level of saving and investment grew the controversy about the equality and inequality of saving and investment. In this controversy the problem of the accumulation of capital has generally received only incidental attention.

This argument has not been based so much on a disagreement about the equality of saving and investment as a dispute about the methodological value of the various concepts of saving and investment. The participants in this discussion have discovered some interesting and useful things. They have found saving and investment to be equal in a different sense from the equality of the classical economists. They have discovered that the aggregates used in the equality which holds for all times to be homogeneous at any and all times only in so far as the types of investment included represent things not bought in a market and consumed and produce a multiplier effect upon the economy in terms of goods produced, bought in a market, and consumed by human beings. The various items included in this concept of saving are always uniform only in that they make resources available for investment. Furthermore, the degree of homogeneity in the aggregates used in the saving-investment equality of the post-classical type varies through time with the circumstances obtaining. The conception of saving and investment as equal under all circumstances is incomplete. To supplement this equality has been the task of those who have defined saving and investment in such manner that they are equal only under special circumstances. The various definitions by which saving and investment are equal only in special situations differ among themselves primarily in their emphasis and not in the purpose for which they were designed, which is to facilitate the consideration of some problems obscured in the definitions by which saving and investment are always equal.

Since the different ways of defining saving and investment arose as a conse-

quence of an assault upon the classical position, the classical framework provides a convenient point of departure. Subsequent to the presentation of the classical position a comprehensive definition of the equality of saving and investment from the standpoint of the interrelations between investment and income will be considered. There will follow brief discussions of three definitions of saving and investment which are of such nature that saving and investment are equal or unequal depending upon the circumstances existing.

II

In their treatment of the problem of saving and investment the classical economists and those who thought like them in this respect were concerned with that part of saving and that part of investment which according to them are brought into equality by the interest rate and result in capital creation. Importation, which sets domestic resources free, was not considered a saving, and exportation was not regarded as a part of investment because equality of the two was thought to be quasi-automatic and not to be brought about by the interest rate and because importation and exportation do not result directly in capital creation. The quantity of saving, or abstinence, was held to vary in the same direction as the magnitude of the interest rate and the amount of investment was thought to vary in a contrary manner. Accordingly, resources set free by abstinence flowed regularly into investment. Any decline in saving was offset by an increase in consumption. True enough, a small amount of hoarding by the irrational might occur. In this event, unfavorable effects of the failure of monetary savings to flow regularly into investment would be prevented not by a change in the velocity of active money but by a decline in money prices,[1] by increased lending by banks,[2] or by increased investment in the mining of the monetary metals.[3]

That the classical economists exaggerated the influence of the interest rate upon the levels of saving and investment and the automaticity of offsets to the failure of monetary savings to move regularly into investment, particularly in the event of widespread hoarding, is now generally conceded.

The classical economists overestimated the influence of changes in the rate of interest upon saving, investment, and consumption.[4] Barring the disappearance

[1] For example see, John Stuart Mill, *Principles of Political Economy with Some of Their Applications to Social Philosophy*, ed. by W. J. Ashley, pp. 496, 561; David Ricardo, *On the Principles of Political Economy*, 3rd ed. (London, 1921), p. 47.

[2] E. von Böhm-Bawerk, *The Positive Theory of Capital*, pp. 115–116; William Stanley Jevons, *Political Economy* (New York, 1884), p. 22.

[3] William Stanley Jevons, *loc. cit.*

[4] This brief consideration of the interest rate is borrowed largely from the following: William J. Fellner, *Monetary Policies and Full Employment* (Berkeley and Los Angeles, 1946), pp. 137–144, 156–159, 167–186; H. D. Henderson, "The Significance of the Interest Rate," *Oxford Economic Studies*, No. 1, pp. 1–13; Lawrence R. Klein, "Theories of Effective Demand and Employment," *The Journal of Political Economy*, April 1947, pp. 111–112; Karin Kock, *A Study of Interest Rates*, pp. 161, 165; F. A. Lutz, "The Interest Rate and Investment in a Dynamic Economy," *American Economic Review*, Dec. 1945, pp. 811–839; H. Makower and J. Marschak, "Assets, Prices and Monetary Theory," *Economica*, 1938, pp. 273–274; J. E. Meade and P. W. S. Andrews, "A Summary of Replies to Questions on Effects

of interest, changes in the rate of interest seem to have ambiguous effects upon the rate of saving. A rise in the rate of interest encourages more saving on the part of some and less on the part of others. A change in the interest rate will not influence saving by firms and by some individuals whose incomes remain unchanged and who do not consciously view saving as an alternative to consumption. Changes in the rate of interest are not automatically accompanied by movements in the same direction of the volume of saving and contrary movements in the volume of consumption.

Under conditions in which the marginal efficiency of capital is known with assurance, the influence of the magnitude of the interest rate upon investment would likely be as great as the classical economists and some others have thought.[5] Under any circumstances it has bearing upon the rate of investment in fields in which the turnover of assets is slow and in which the rate of return appears fairly certain, for example, in hydroelectric power developments. For much and perhaps most investment, however, interest charges are only a small part of the cost of execution, and, accordingly, because of uncertainty and the greater importance of other costs the height of the interest rate within its usual degree of variation is not a major determinant of investment in these lines. To the extent that a fall in the interest rate which is believed to be of a temporary nature influences favorably the willingness to invest, this favorable influence may well be offset by a decline in the willingness to lend, for monetary savings may be

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of Interest Rates," *Oxford Economic Studies*, No. 1, pp. 28–31; J. J. O'Leary, *Future of Long-term Interest Rates* (Conn. Gen. Life Ins. Co., 1945); G. L. S. Shackle, "Interest Rates and the Pace of Investment," *The Economic Journal*, March 1946, pp. 16–17; Henry C. Wallich, "The Changing Significance of the Interest Rate," *The American Economic Review*, Dec. 1946, pp. 490–512.

[5] "The interest rate" as used herein indicates the rent paid for money. In addition to the rent paid for money, the debtor-creditor contracts include other elements, such as the down payment, the length of contract, costs to float securities, the manner in which the principal is to be repaid, and the like. Changes in certain of these elements have a great short-run effect upon consumption. Such is the case because the incidence of the costs which these elements involve is for most consumptive borrowing upon the debtor. In order to buy what he wishes, the consumer has the choice of mortgaging his future income or of accumulating the purchase price prior to buying. For this reason, changes in the costs of consumer credit are likely to have only short-run effects upon consumption.

As for the effects of these costs upon investment, it should be noted that they are not likely to affect greatly the volume of monetary saving placed upon the market. The saver has merely the choice of paying the expenses of savings banks, insurance companies, and investment banks, of holding his money and getting no interest, or of subjecting himself to the costs of hunting up outlets on his own or of going into business himself. The buyer of securities pays these costs in the form of a lower rent received upon his money or as an alternative to paying other costs. The costs of marketing the securities of a small concern are much greater than the cost of marketing the securities of large established firms. This differential against the small firm may operate to diminish investment to some extent. Offsetting factors to this tendency are that in part the differential does not decrease total investment but encourages concentration of investment in the hands of the large firms, that in some cases it increases the disposition of those financially interested in small firms to save and to reinvest net receipts, and that it forces more intensive cultivation of local and personal contacts as sources of funds for small concerns.

withheld awaiting the prospect of a higher rate of return. Within rather wide limits a decline in the rate of interest which is believed to be permanent will probably not have a significantly adverse effect on the willingness to lend.

If the interest rate does not operate to ensure the only resources which will flow regularly into employment will be set free by saving, the classical economists and their followers thought that other factors would supplement it. These factors, however, do not always operate so as to prevent unemployment. First, the classical economists held that price adjustments would counteract the effects of changes in the quantity of active money. They felt that in the event of hoarding price falls would maintain purchasing power in real terms. There are several interrelated reasons why this development commonly has not provided an adequate offset to hoarding. Because of monopolistic and oligopolistic elements in product and factor markets money prices commonly do not fall as fast as active money is diminished. In case that the change is not accompanied by cost-reducing developments, a fall in one's price sets up an unfavorable state of expectations as to the future of one's real position. Many people who find no suitable outlets for their monetary savings may not elect to increase their expenditures for consumption. Second, some economists of the nineteenth century reasoned that hoarding would be offset by increased lending by the banks. They were assuming, of course, that business men would have adequate incentives to invest, for factors which bring about a circumstance in which business men do not plan investment and in which they are unwilling or unable to offer holders of monetary savings sufficient inducement to buy stocks and bonds also operate to discourage lending by the commercial banks. As for the monetary metals, it may be observed that throughout the history of man the total output of these has been comparatively small and that annual increments have not been sufficiently variable to permit the absorption of large amounts of resources in mining them as a consequence of a rise in their real prices. The most important factors influencing changes in the annual output of these metals have been the discovery of new mines, which is largely fortuitous, and technological changes.

III

Though the classical explanation of the equality of saving and investment is inadequate, it is still true that, if investment is defined for a given time and saving is conceived to include all processes which make resources available for this investment, saving and investment are equal. This equality of saving and investment is independent of the rate of the flow of resources made available by saving into investment, whereas the formulation of the classical economists assumed a regular rate of flow.

If domestic goods and services produced, purchased in the market by human beings, and consumed by them in a given period of time are subtracted from gross national income for this period, the remainder may be described as saving and investment, or as gross saving and investment. Investment thus defined includes exports which have no uniform relationship to the maintenance and augmentation of capital. Imports and exports do not, of course, represent savings and

investment for the world at large. It includes also the purchase of goods and services by government through means other than the sale of goods and services in a market. This activity on the part of government may increase or decrease capital depending upon the nature of the governmental endeavor and the fullness of employment. Investment represents the use for purposes other than to produce marketable goods consumed of resources made available through relatively voluntary abstinence of individuals, taxation to finance governmental purchases of goods and services, importation of goods and services, and institutional saving, the last including capital consumption for investment inclusive of the diminution of inventories for this purpose. Reasoning along these lines can produce equalities like the well-known equations of Keynes' *General Theory* in which

$$\begin{aligned} &\text{Income (Y)} = \text{Consumption (C)} + \text{Investment (I)}. \\ &\text{Saving (S)} = \text{Y} - \text{C}. \\ &\text{Therefore S} = \text{I}.^{6} \end{aligned} \qquad (1)$$

The equality of saving and investment in the sense of equation (1) holds *ex ante* as well as *ex post*, for equality exists regardless of the level of the national income. The equality of saving and investment is an interesting fact. It does not in itself point up any interrelations between investment and saving on one hand and income on the other. To isolate some of these interrelations has been a part of the work of those economists who have defined saving and investment, so that they equal under some circumstances but unequal in others. Contributors toward this end have been D. H. Robertson, the Stockholm economists, the developers of the multiplier theory, and the economists who have defined investment as gross investment less unwanted accumulation of inventories and saving as gross saving less diminution of inventories.[7]

In the following discussion no explicit attention will be given to monetary flows. It will be assumed that the failure of resources set free in the saving-investment process to move regularly into employment is accompanied by the failure of monetary saving to so move and/or the failure to inject new money into the economy.

IV

According to D. H. Robertson, disposable income of today is not the income produced today but the income produced yesterday.[8] Today's saving is equal to today's disposable income less today's consumption If more resources are available than are provided by today's saving and are invested, investment will exceed today's saving. Income will rise and tomorrow's saving will exceed today's. Today's investment will be less than today's saving if the freed resources do not

[6] John M. Keynes, *The General Theory*, pp. 61-65. See also R. G. Hawtrey, *Capital and Employment*, p. 174; A. P. Lerner, "Savings and Investment: Definitions, Assumptions, Objectives," *The Quarterly Journal of Economics*, Dec. 1939, p. 616. *Cf.* Lawrence R. Klein, *The Keynesian Revolution*, pp. 110-112.

[7] "Unwanted" indicates that the original expectations of the owners of these inventories have been disappointed.

[8] See his "Saving and Hoarding," *The Economic Journal*, Sept. 1933, pp. 399-413.

move into investment. Income will decline and tomorrow's saving will be smaller than today's.

Robertson's basic set-up is substantially another way of saying that resources set free by saving may or may not move regularly into investment. This is an important matter, but, as will be shown subsequently, Robertson's lagged definitions are not essential for its consideration. It is true enough that the elements of the saving-investment process isolated subsequently by others can be fitted into Robertson's system.

V

What has come to be known as the Swedish solution to the problem of the equality and inequality of saving and investment was developed by Erik Lindahl, Erik Lundberg, Gunnar Myrdal, and Bertil Ohlin.[9] They distinguish between *ex ante*, planned, or prospective income, consumption, saving, and investment and what appears to be these same categories *ex post*, realized, or retrospective. They attribute variations in income to differences between planned investment and planned saving. Income rises or falls depending on whether planned investment exceeds or is exceeded by planned saving. An excess of planned saving over planned investment gives rise to unplanned investment. Similarly, an excess of planned investment brings about unplanned saving.

The distinction betweee the inequality of planned saving and planned investment and the equality of realized saving and investment seems a bit strange. If all saving and all investment are taken into account, it is impossible for a society to plan to invest more or less than it plans to save. Furthermore, in a macroeconomic sense planned magnitudes must be equal to realized magnitudes unless the plans are changed. When prospective and retrospective saving and investment are identical, income will rise, fall, or remain unchanged depending upon whether employment is rising, falling, or remaining unchanged. In a less simple world the macroeconomic plan is subject to continuous change because the plans of individuals and firms which condition the macroeconomic plan are subject to surprise.[10] Realized surprises may come from two sources. First, they may come from factors which may be regarded as exogenous to the macroeconomic plan. Second, the macroeconomic plan may contain the seeds of its own destruction. Discrepancies between individual plans and the fate to which the macroeconomic plan subjects the individual planners can be of such magnitude as to cause drastic changes in the original macroeconomic plan. Though the *ex ante* magnitudes are equal and the same holds for the *ex post* magnitudes, the sums equated *ex ante* may not be identical with the sums actually realized at some subsequent time. The Swedish system lends itself to the consideration of the interrelations between the microeconomic and the macroeconomic aspects of saving

[9] Erik Lindahl, *Studies in the Theory of Money and Capital;* Erik Lundberg, *Studies in the Theory of Economic Expansion;* Gunnar Myrdal, *Monetary Equilibrium;* Bertil Ohlin, "Some Notes on the Stockholm Theory of Savings and Investment," *The Economic Journal*, March and June 1937, pp. 53–69, 221–240.

[10] This point has been developed by Harold M. Somers. See his "A Theory of Income Determination," *The Journal of Political Economy*, Dec. 1950, pp. 523–541.

and investment. *Ex ante* microscopic elements appear in the form of plans of individuals; *ex post* these elements appear in the guise of anticipated and unplanned saving and investment. Macroeconomic aspects appear in the form of *ex ante* and *ex post* equality of saving and investment. The homogeneity of the aggregates increases as the microscopic unplanned elements diminish in importance.

An attempt to clarify the Swedish position came when Ohlin explained that planned or *ex ante* saving and investment are conceived in terms of schedules whereas retrospective saving and investment are not so defined.[11] Ohlin looks upon the interest rate as determined by the demand for and the supply of loanable funds. Schedules of planned investment and planned saving are conceived to show how much people will plan to save and invest at different interest rates. There are some objections to Ohlin's revised presentation. First, schedules of demand and supply are helpful in proportion to the extent to which demand and supply are independent. To a considerable extent the demand for and the supply of loanable funds are not independent. When the state of expectations of businessmen is favorable, they are willing to borrow and at the same time and for the same reasons owners of monetary savings and the money-creating banks are willing to lend. When the state of expectations is less favorable, fewer businessmen wish to borrow and few wish to lend. Though usually changes in the demand for loanable funds will be accompanied by changes in the same direction in the supply of loanable funds, the demand for and the supply of loanable funds may well not change by the same percentage. Of course, the supply of loanable funds may be changed by governmental intervention independent of the state of expectations of borrowing businessmen. Second, as noted in Section III, a large part of investment is not very responsive to usual changes in the rate of interest and the effect of changes in the rate of interest upon the volume of saving is uncertain at best. It is highly questionable whether Ohlin's schedules add anything to his first statement of the problem.

Implicitly, what the Stockholm economists have done is to show the necessity of thinking in both microscopic and macroscopic terms. The conflicts between the individual and social positions are clearly evident in their system. They are careful to note that the homogeneity of saving and investment varies in an inverse manner to the magnitudes of the items which are unanticipated from a microeconomic position. The effects of changes in the composition of saving and investment upon income are outlined.

VI

The multiplier is the ratio of the increment of income conceived to flow from an increment of investment to the increment of investment itself. The increment of income consists of the increment of investment and the increment of consumption of domestic produce conceived to come about as a consequence of the increment of investment. The magnitude of the multiplier varies inversely to the

[11] See his "Alternative Theories of the Rate of Interest," *The Economic Journal*, Sept. 1937, pp. 423–428. See also Gottfried Haberler, *Prosperity and Depression*.

marginal rate of saving or is the reciprocal of the marginal rate of saving. If the multiplier is denoted by k and the marginal rate of consumption of domestic produce by c, an increment of investment of 1 will produce the multiplier indicated by the following equation:

$$k = 1 + c + c^2 + c^3 + c^4 \ldots c^n. \tag{2}$$

Simultaneously saving (S_a), the subscript a referring to incremental saving, will occur in the manner indicated by the following equation:

$$S_a = (1 - c) + (c - c^2) + (c^2 - c^3) + (c^3 - c^4) \ldots (c^{n-1} - c^n). \tag{3}$$

By the time the progressions of equations (2) and (3) are realized, as in substance they will be if the marginal rate of saving remains above zero, the multiplier effect upon income has petered out and the multiplier has given rise to an increment of saving equal to the original increment of investment. By the time the multiplier is realized, another increment of investment equal to the one initiating the multiplier in question will be brought about. Such is necessarily the case if unwanted inventory accumulation is included as a part of investment. Investment under the assumption of a marginal rate of saving greater than zero necessitates further investment. Investment in the form of unwanted inventory accumulation will, of course, diminish employment and income. Unintended accumulation of inventories may be reduced by the reduction of the over-all marginal propensity to save through transfer payments and by the decision of some to use past savings for consumption. It follows that an increase in investment as defined in equation (1) will not always increase consumption. Prior to this increase in investment in the sense of equation (1), consumption may have been maintained by transfer payments and by the expenditure of past savings. The multiplier theory is not inconsistent with the period equality of saving and investment. It is an effort to show the effects of particular increments of investment, which effects are not uniform.

VII

Some economists who have used and developed the multiplier theory have joined the Swedish economists in isolating a part of saving and a part of investment. Sometimes this part of saving and this part of investment are described roughly as saving and investment in the schedule senses because they provide the basis for the construction of meaningful schedules. Generally, these economists simplify their presentations by concerning themselves with a closed economy. To arrive at their concept of saving they simply subtract any diminution in inventories from gross saving. To get investment in their sense they subtract unwanted inventory accumulation from gross investment. The resulting aggregates are more homogeneous than those indicated by equation (1). A method for pointing up some interesting and important developments results.[12]

[12] For graphs and discussion of saving and investment in the schedule senses see Dudley Dillard, *The Economics of John Maynard Keynes*, pp. 33–37, 59–67; Lawrence R. Klein, *The*

In the following discussion it will be assumed that a net import balance represents the importation of investment goods which make investment possible or the importation of consumer goods for those employed in the production of investment goods. Reference will be made to "gross saving *minus* any diminution of inventories and the net import balance," for the economy is assumed to be open. During periods of continuing or increasing investment when some investment is made possible by diminishing inventories and the net import balance, the state of expectations will improve, income will rise, and other forms of saving will tend to displace the reduction of inventories and perhaps to eliminate the net import balance. After inventories are no longer being reduced and the net import balance has been eliminated, income can still rise if additional resources can be brought into employment. When saving net of the excluded items exceeds investment net of unwanted accumulation of inventories, income will decline, for investment in the form of unwanted accumulation of inventories will depress the state of expectations and result in unemployment, whereas other forms of investment will affect the state of expectations favorably and maintain or increase employment.

Identification of saving minus reduction in inventories or saving minus the reduction of inventories and the net import balance and investment minus unwanted accumulation of inventories is not an attempt to deny the equality of saving and investment of equation (1). It is a device for showing that different types of investment and saving produce different effects. The fact that resources set free by saving may or may not move into investment is accounted for. Interrelations between the role of individuals and macroeconomic developments are shown. Thus, if some individuals plan to save more than others plan to invest, unwanted accumulation of inventories results and the state of expectations is depressed. The forms of investment and saving identified can be regarded *ex ante* or *ex post*. If this approach is used, the formulation of D. H. Robertson need not be employed. This approach itself accounts for the fact that resources set free by saving may or may not move regularly into investment. Intentionally or incidentally this approach appears to be a refinement of the Swedish scheme.

VIII

Any dispute about the equality and inequality of saving and investment is tangential. The participants in the dispute miss the point that it is necessary to think in terms of both aggregates and the elements composing the aggregates unless the components of the aggregates are homogeneous in all respects. If

Keynesian Revolution, pp. 110–117; Paul A. Samuelson, *Economics: An Introductory Analysis* (2nd ed.), 259–299.

For an arithmetic demonstration that with a constant marginal rate of consumption successive equal increments of investment will eventually result in an equilibrium of income and of saving and investment in the schedule senses, see Fritz Machlup, "Period Analysis and Multiplier Theory," *The Quarterly Journal of Economics*, Nov. 1939, p. 18. For more refined demonstrations see Richard M. Goodwin, "The Multiplier," *The New Economics*, ed. by S. E. Harris, pp. 423–487, 491–492; Paul A. Samuelson, "A Fundamental Multiplier Identity," *Econometrica*, July–Oct. 1943, pp. 221–226.

investment is defined as gross income for a period of time minus goods produced, sold in a market, and consumed by human beings, and, if saving is defined to include all methods of making resources available for this investment, there can be no doubt that saving and investment are always equal. The components of the aggregate of investment are, however, alike only in that they represent goods and services produced in a given period of time and not sold in a market and consumed during this same time span and that they produce a multiplier effect in terms of these consumer goods. In an analogous manner the components of the aggregate of saving are alike only in that they make resources available for investment.

In order to study the interrelations between the investment-saving process and the national income, it has been necessary to isolate a number of aspects of this process. First, it was found that different increments of investment have different multiplier effects upon the economy in terms of consumption. This is a justification for the particular microscopic approach which the multiplier represents. Second, the definitions according to which saving and investment are always equal are valid regardless of the level of employment and income. Consequently, it is necessary to account for the fact that resources set free by saving may or may not move regularly into employment. D. H. Robertson said so by means of lagged definitions. Others have sought to account for this fact by asking whether or not investment is taking the form of unwanted accumulation of inventories. Third, changes in the type of investment will tend to cause changes in the type of saving and *vice versa*. Thus, continued or increasing investment net of unwanted accumulation of inventories will tend to cause other forms of saving to replace diminution of inventories and the net import balance. An excess of saving exclusive of reduction of inventories over investment exclusive of unwanted accumulation of inventories will be accompanied by an increase in unintended accumulation of inventories and unemployment. Fourth, it is helpful to explain that there may well be conflicts between the plans of individuals and the aggregate of the plans of all individuals. It is only by such isolation of elements that anything approaching a dynamic process analysis is possible. Had the contributors to this type of analysis always been sufficiently explicit about this matter, the controversy about the equality and inequality of saving and investment need never have occurred. It would also have been helpful if the Stockholm economists had made it explicit as to when they are reasoning in microscopic terms and when their thinking is macroeconomic in nature. D. H. Robertson's basic formulation, which consists of lagged definitions, has nothing to add to the Swedish approach and to the approach of those who employ the multiplier and gross investment adjusted by the removal of unwanted accumulation of inventories and gross saving with certain items removed.

To a considerable extent the contributors to the analysis of the interrelations between the level of investment and income have abstracted from the problem of capital accumulation. For the consideration of the problem of capital accumulation, further refinement of the concepts of saving and investment is necessary.

ASSOCIATION-WIDE COLLECTIVE BARGAINING IN THE FLINT GLASS INDUSTRY

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Until the strike of September, 1950, the American Flint Glass Workers' Union, AFL, and the National Association of Manufacturers of Pressed and Blown Glassware could boast of 40 years without a major authorized work stoppage in NAMPBG plants. This recent conflict, however, was the result of pressures which have been building up within the flint glass industry[1] for more than a decade. These pressures are challenging the attitudes and procedures supporting one of the nation's oldest and most successful systems of association-wide collective bargaining.[2]

I. *Challenge to Established Practices*

The multiple-craft AFGWU was born of a strike in 1878 and practiced extremely militant local bargaining for a decade. Between 1887 and 1892 the different crafts inaugurated association-wide bargaining with various employer groups, including the Associated Manufacturers, predecessor of the NAMPBG. In the 1930's the AFGWU found it advisable to organize into the "miscellaneous" division, the flint glass industry's unskilled and semi-skilled workers and thus become a quasi-industrial union.[3]

In recent years the union has become more aggressive. The gains won by other unions, especially those secured by the Federation of Glass, Ceramic and Silica Sand Workers, CIO, which has "stolen" several flint glass plants, have increased the expectations of the AFGWU members. Furthermore, in January, 1950, the AFGWU consolidated its two divisions, giving the large miscellaneous *group* a vote equal to that of the much smaller skilled *group*. This increased voting strength in the hands of the "low paid" miscellaneous workers has added to the union's militancy.

[1] The flint glass, or pressed and blown glassware, industry, which produces such items as crystal tableware, lamp globes, television bulbs, thermometers, glass novelties, etc., is to be distinguished from the glass container industry, which makes bottles and jars, and the flat glass industry, which concentrates on window and plate glass.

[2] The system is not *national* collective bargaining in the strictest sense. Although most firms of significant size are unionized, only a minority belongs to the association. However, the NAMPBG firms are usually larger than the "independents" and employed a majority of the AFGWU workers, at least until the 1950 withdrawals. Furthermore, the "independents", except for the very important Corning plants, a small group of lamp chimney shops and a few others, accept the NAMPBG agreement as their own. For these reasons the term *national* agreement will be used to refer to NAMPBG agreements.

This paper is based on extensive study of union publications and interviews with union officials, supplemented by numerous interviews with glassware manufacturers, a number of plant visits and correspondence with employer representatives.

[3] As of May 31, 1950, there were 7,431 skilled and 24,761 miscellaneous members, *AFGWU Convention Proceedings*, 1950, p. 164.

Economic forces, meanwhile, have tended to divide the employers. The *automatic machine* plants, employing principally mould makers, machinists, automatic machine operators and miscellaneous workers, have prospered. The *combination* plants which bring under one roof machine and hand operations have done less well. The *hand* plants using a minimum of machinery and employing nearly all types of skilled and miscellaneous workers[4] as a group have been under severe economic pressure.

The automatic machines have gradually encroached upon the market of the hand workers. In the field that remains, foreign competition has increased since the war and substitute products, notably plastics and light metals, have made inroads.

To gain some relief the hand and combination plants have demanded relaxation of restrictive rules for skilled workers and wage differentials for their miscellaneous workers. The lower wages in the hand and combination plants which resulted have been opposed by the members. Indeed, union resistance to a "poorer" contract for the miscellaneous *and* skilled workers in the hand and combination plants than for the automatic machine plant workers appears to have been the major factor in touching off the 1950 strike.

The union's leaders and members and, to a lesser extent, the employers, have become dissatisfied with some aspects of the present bargaining system. Inasmuch as these methods were evolved for a much smaller multiple-craft union, it is not surprising that modification is necessary to make them fully workable for a larger quasi-industrial union operating in a different economic setting. And the employers and the union have been experimenting toward this end.

II. *The Present Bargaining Pattern*

The various crafts, or "departments," of the AFGWU have met employer representatives for bargaining conferences each year, usually in Atlantic City, New Jersey, since 1887.

In preparation for these conferences, the local unions and individual companies each spring submit propositions to their union or association headquarters.[5] These are edited and exchanged. The union then submits both sets to departmental committees in its annual convention which immediately precedes the joint conferences. These committees then give instructions to the executive board members who negotiate the agreements. The manufacturers likewise meet

[4] The AFGWU today includes the following crafts and sub-crafts, most of which negotiate separate "national" agreements: pressware, mould making, punch tumbler and stemware, paste mould, cutting, chimney, caster place, machine operators, iron mould, machinists, lamp workers, machine pressware, bulb, stopper grinders, engraving, top-of-stove, press prescription branch and perfume cutting and smoothing branch.

[5] There are today two employer groups, the National Association of Manufacturers of Pressed and Blown Glassware and the Glass Container Manufacturers' Institute. The NAMPBG employs both skilled and miscellaneous members of the AFGWU. The GCMI employs only mould makers and a few minor subgroups of AFGWU skilled members. Most of the glass container industry's miscellaneous and other skilled workers are in the Glass Bottle Blowers' Association, AFL.

before conference to examine both groups of demands and map their strategy. If time permits, the revisions made at these meetings are also exchanged before bargaining begins.

When the conferences open, the revised proposals and counter-proposals are taken up department by department[6] following a schedule laid out, one year by the union, the next by the manufacturers. Specific proposals from the two groups are usually taken up alternately. The national union officers, supported by executive board members usually only from the department concerned, speak for the union. The employers producing the line of glassware under discussion are led in negotiations by the conference chairman and the secretary of the manufacturers' association. Each side attempts to sell its propositions to the other. Even though dire predictions and threats are made in this process, the underlying effort is to persuade.

If discussion reveals that the parties are in agreement, a representative of one side will "move" the proposition. An opponent will second it and a unanimous vote of approval will follow. When discussion shows disagreement, the issue may be postponed to a more favorable time during the conference, or withdrawn. Usually, however, the sponsoring party will "move" the proposition, whereupon the opposing group will vote "nay" and defeat it. Each group votes as a unit, except in rare cases. When the contract proposals from each department are thus disposed of, the parties turn to the pending local disputes and handle them in an identical manner.

The agreements reached in Atlantic City ordinarily become effective the first Monday in September. If the regular conferences do not produce agreement, however, others are usually scheduled until a decision is made. In most cases in which the time lapse is not great these late settlements are made retroactive to the customary effective date.

III. *Underlying Principles and Procedures*

The basic principles underlying the present bargaining system and a number of the subsidiary procedures developed gradually and painfully from bargaining experiences going back to 1878.

The conference system itself was adopted by the various departments between 1887 and 1892 only after a decade or more of belligerent local relationships which culminated in the great tableware strike of 1887–1888. Settlement of this conflict firmly established the conference system and two additional bargaining principles. First, mutual security was bolstered by a clause which acknowledged the right of the employer to hire and discharge, and also granted the union a preferential shop. Second, association-wide uniformity of wage rates was accepted.

A fourth principle emerged in 1891. Although business was depressed, the union's 1890 convention had instructed its bargaining committees to present extreme demands. The employers resisted throughout prolonged bargaining

[6] The "miscellaneous" division is usually treated as one department.

sessions, though they were willing to sign the old scales and make minor concessions on rules. The union representatives faced a dilemma. To accept the manufacturers' proposals would violate their instructions; to reject them would lead to a disastrous strike. Under President William J. Smith's leadership they resolved the dilemma by ordering their men to continue working at the last year's scale while they sought modification of the excessive demands at the 1891 convention. That body and its successors until 1950 accepted the vital principle of tacitly extending the expiring agreement until a new one can be reached.

The principle, or set of principles, embodied in the Star Island Agreement did not crystallize at one time. The basis of the agreement appeared in the 1887–1888 tableware strike-settlement provision that "In case of a disagreement in any factory in this association, it shall, if possible, be settled in the factory in which it occurs. In case of a failure to agree, matters shall be referred to the manufacturers' and workers' committee for settlement. Pending a discussion and decision of such differences, there shall be no lockout, strike or cessation of work by either employer or employed."[7]

This agreement, and similar arrangements with two other employer associations, worked with considerable success until the union's great organizational drive of 1898 to 1903 brought 106 new locals into the union. The new members were poorly disciplined and indulged in many wildcat strikes. In an effort to eliminate these strikes the 1903 convention forbade all work stoppages over grievances until the entire union membership had voted its approval or the president had given permission in an emergency.

The NAMPBG demanded still further protection. Under this pressure the parties met in late July, 1903, on Star Island, Lake St. Clair, Michigan, to find a solution. In this meeting former union president William J. Smith (who had resigned his office in 1899 and was now speaking for the employers) and President Thomas W. Rowe worked out the "Star Island Agreement." The 1887–1888 agreement had provided that grievances not solved locally would be referred to a national joint committee and that meanwhile there were to be no work stoppages. The new agreement added the words: ". . . and the decision of said Manufacturers' and Workers' Committee shall be final and binding upon the Manufacturers' Association and the AFGWU and the members thereof. The AFGWU agrees to assist the manufacturers in procuring competent workmen to fill the place of any employee who violates or refuses to abide by [this] rule."[8]

The final element of the Star Island Agreement was added in 1909 as part of the settlement of the first of the union's two major work stoppages in NAMPBG plants. The parties had disagreed over the proper application in association plants of an agreement negotiated with independent chimney manufacturers. The NAMPBG interpreted the contract as calling for a temporary wage reduction in certain association plants, which the union resisted. The conflict was soon compromised, whereupon the Star Island Agreement was reaffirmed with the

[7] T. W. Rowe, *Souvenir History of the American Flint Glass Workers' Union*, (1910), pp. 37–38.

[8] *AFGWU Convention Proceedings*, 1904, p. 243.

further understanding that in the future there would be no change in the working conditions during discussion of a dispute.

Hard experience also led the parties to adopt and improve a number of procedures surrounding the bargaining system.

Pre-convention bargaining conferences early gave way to *post-convention* conferences because the conventions made too many changes when agreements were submitted to them for approval. Ratification by membership referendum was substituted.

In 1905 the union eliminated its special negotiating committees and assigned these duties to the national executive board. This body, elected by referendum, already handled organization and grievance settlement work. The national officers sought in vain to have this board elected from among convention delegates who would be familiar with convention discussions. The skilled workers have continued the practice of direct election, but the miscellaneous workers select their boards at their annual conventions.

Also in 1905 the union granted the negotiating committees in all but four departments full authority to sign agreements, without a referendum, unless they called for wage reductions or a general change in the system of working. The manufacturers have continued to press for unlimited power to settle (with which their representatives are clothed), but only four skilled groups and the miscellaneous workers have made this change.

The parties decided in 1912 that the employees and employer directly involved in any dispute could not vote on its settlement, but the rule seldom has been enforced. In 1918 the parties agreed on the first Monday in September as a uniform effective date for new contracts. By this date the summer conferences usually would have completed their work and retroactive settlements could be avoided. Two years later the union finally limited the number of proposals each department could submit to the annual conferences. This change allowed the union as well as the employers to concentrate upon key propositions only. The miscellaneous division, set up in 1937, has not yet taken this needed step.

In 1927 the employers decided to refuse to meet in conference with special local representatives whose employers were not members of the association. Such "outsiders", they felt, often prevented amicable settlements. When these men were elected executive board members, however, the employers did not object to their presence because they were then truly union representatives.

These procedures, though less important than the basic principles, have facilitated the smooth operation of the conference system.

IV. *Extending the Annual Conference System to the Miscellaneous Workers*

The AFGWU first began to organize the miscellaneous workers in 1934, but the decision met strong opposition among the skilled rank and file and from the employers. As a result, organization was not pressed until 1936 after the passage of the Wagner Act and the CIO's invasion of the flint glass industry.

The union's renewed efforts culminated in an association-wide agreement covering the miscellaneous workers in early 1937. In this agreement the new

members adopted the joint conference system and the Star Island Agreement in toto. The division even gave its conference representatives full authority to settle. This outcome was a major accomplishment for the union, won despite the bitter opposition of some employers. Furthermore, the AFGWU's sister union, the Glass Bottle Blowers' Association, AFL, obtained only local agreements for its miscellaneous workers in the glass container industry.

The victory was achieved at the price of three important compromises. The new division accepted low minimum wage rates because the prevailing wage differences were too great to be immediately eliminated by a high minimum. Second, lower rates for women than for men were accepted on numerous jobs, although the employers did agree to pay the "male rate" to women placed on work regularly performed by men, "provided they are competent."[9] Third, the establishment and operation of incentive plans were left largely to local management, with only limited participation by the local union. The variety of wage plans in use, the differences in basic working conditions, equipment and methods, and the complexity of most of the incentive plans used for miscellaneous workers made a national agreement seemingly impossible.

V. *Problems of Association-Wide Collective Bargaining*

Incorporation of the miscellaneous workers into the system has emphasized some of the difficulties apparently inherent in association-wide collective bargaining. These problems center about the distinction between local and national issues, uniform contract provisions for companies with unequal ability-to-pay, and the enforcement of association agreements, especially in non-association firms.

The union and the manufacturers' association permit local agreements supplementing the association contracts. This practice makes necessary a distinction between national and local issues. All local agreements, written or not, must conform to the national agreement. To enforce this rule all important local agreements are submitted to the national officers of both associations and occasionally are rejected.[10]

Many issues are handled locally. The original prices on all new items produced by skilled workers and corrections of intra-plant wage inequities are both worked out in the plants concerned. "Division-of-time" for the skilled workers and seniority provisions and incentive plans for the miscellaneous workers are arranged locally. Original grievances and disputes returned to the parties for settlement by the joint conferences are also resolved by local negotiators. In general, local agreements may cover any matter not dealt with by the association-wide agreements and, in individual cases, may go beyond the minimum conditions specified in them.[11]

Diversity of operations and variability of the employers' ability-to-pay have

[9] 1937 contract, rule 8.

[10] For example, see *AFGWU Convention Proceedings*, 1938, p. 316.

[11] Libbey Glass Company vs. the AFGWU, RWLB case 5-HO-608, p. 59, of the hearing report.

made the principle of wage uniformity difficult to realize. The multicraft character of the union and its corresponding departmental structure, however, have aided the parties in meeting this problem. Differences in ability-to-pay resulting from differences in the type of ware manufactured by the various crafts are at least partially reflected in the wages agreed upon for the separate departmental contracts. Differences between plants producing the identical ware must be achieved otherwise.

Profitable firms not infrequently pay *individual* rates above the association scale.[12] On several occasions, firms have secured permission from the NAMPBG to give general increases in advance of an association adjustment or even beyond it. In one case, however, a member firm was expelled for giving such increases without advance approval. The union has stoutly resisted wage rates below the association scale. Nevertheless, it permitted them temporarily in the cases of the United States Glass Company and, years later, the non-association member Dunbar Glass Company, which were unable to assume the full scale when they were organized.

Encountering stiff opposition to its wage demands soon after it was organized, the miscellaneous division attempted to classify the employers to exploit their varying ability-to-pay. As a result there have been frequent separate meetings for the decorating and the corrugated fiber paper box workers. More important, since 1941 wage differentials have been established between hand, combination hand and automatic, and automatic machine plants. These differentials can be seen in the median wage rates which in the 1946–47 agreement, for instance, were \$.73, \$.815 and \$.855, respectively.

A further minor differential permits the employers to pay miscellaneous iron and paste mould workers when producing illuminating ware in the hand and combination plants one and one-half cent and two cents (respectively) less than the standard rate.[13] Differentials have been extended even to night shift bonuses. The union won four and five cent bonuses for the combination and automatic plants (respectively) early in 1945, then almost immediately traded them for wage increases. Differential bonuses of three and five cents were retained for for non-rotating positions.[14]

These modifications of the uniformity principle have eased the pressure on marginal firms and processes, but they have not solved the financial difficulties of the hand plants. These firms are now gravely endangered by foreign and domestic competition.

Enforcement of the national agreements rests primarily with the union. The manufacturers' association will censure members who violate their agreements and will even expel firms granting unauthorized wage increases. They are not prepared, however, to invoke stern penalties for failure to observe the agree-

[12] Interview with the late T. W. Rowe; and R. A. Lester and E. A. Robie, *Wages Under National and Regional Collective Bargaining, Experience in Seven Industries*, p. 15.

[13] See for example, pp. 18, 36 of the 1946–47 contract.

[14] *AFGWU Miscellaneous Division Circular 78*, Aug. 23, 1945, pp. 16–17.

ment.[15] Nevertheless, companies desiring to openly break with the union leave the association first. The union watches the employers carefully, investigating claims of contract violation and striving for immediate correction. The national officers also make certain that the locals insist upon the full scale.

The AFGWU persuades most non-association factories to sign an agreement to follow the "rules and regulations and conference agreements" negotiated nationally. Whenever changes are agreed upon in Atlantic City, the union notifies these firms and they immediately comply. If they should fail to respond, the union does not hesitate to strike. With a few large independent firms, the AFGWU negotiates separate full-length agreements. In these contracts the union strives to duplicate the national agreements except possibly in the case of the Corning Glass Works. There is usually no attempt to impose higher rates or better conditions.

VI. *Experience with Association-Wide Collective Bargaining*

Impact on the workers: The AFGWU through local and national bargaining has won for its members the familiar non-wage benefits of union organization: greater security, increased recognition, more independence and a voice in controlling their working life. These are intangible but significant gains.

Unionization has brought assurance of fair grievance settlement. Most disputes are handled locally though sometimes with the help of a national representative. Difficult disputes are settled by national joint conferences under the Star Island Agreement. The number of cases going to joint conference has steadily declined. Between 1903 and 1916, for instance, an average of 81 per year were submitted. Between 1937 and 1947, the skilled *and* miscellaneous divisions submitted an average of only 36.[16]

Most of the grievances reaching joint conferences are concentrated in a few skilled departments, notably the large and aggressive pressware department, and in a few large plants. Almost all of the disputes in the skilled division related to the industry's modified piece work system. In the miscellaneous division, most of the cases concern ordinary wage rates, though disputes over discharge, discrimination and overtime are fairly common.

Three facts stand out in the summary of the industry's experience in handling disputes which is presented in Table 1. First, the conferences since 1924 have *failed to settle finally* more than half of the disputes in the skilled division and two-thirds of the disputes in the miscellaneous division. Second, more disputes have been decided for the workers than for the employers in the skilled division. Third, the employers have won more disputes than the workers in the miscellaneous division.

Most of the disputes not resolved in conference, however, are later settled

[15] Milton Derber, "Glass," in H. A. Millis and others, *How Collective Bargaining Works*, pp. 699–700.

[16] *AFGWU Convention Proceedings*, 1948, p. 123, and miscellaneous division conference circulars from 1937 through 1947.

locally or by special joint committees. The union claims that a substantial majority of these disputes are won by the workers. Cases reported as "not settled" are usually the result of a conference deadlock. The number of such cases is gradually increasing, a tendency which might seriously weaken the system if it continues.

AFGWU members have suffered a minimum of wage losses due to work stoppages. Severe curtailment of wildcat strikes and the practice of extending

TABLE 1

Disposition of Disputes Presented to Annual Conferences of the Skilled Division, 1924–1947, and of the Miscellaneous Division, 1937–1947

DISPOSITION	SKILLED DIVISION 1924–1947		MISCELLANEOUS DIVISION 1937–1947	
	Number of Disputes	Per cent of Total	Number of Disputes	Per cent of Total
Settled in favor of manufacturers	102	14	12	12
Settled in favor of workers	112	15	7	7
Compromised	123	17	9	9
Subtotal: Disputes settled by conference	337	46	28	28
Referred to joint special committees or to parties concerned	249	33	37	38
Settled prior to conference or withdrawn	52	7	20	21
No record of settlement	74	10	4	4
Not settled	32	4	7	7
Consideration refused until properly presented	0	0	1	1
Total	744	100	97	100[1]

[1] Column does not add to 100 per cent because of rounding.

Sources: Skilled Division, study made by George Dougherty, executive vice-president of the NAMPBG quoted in Proceedings of the Skilled Convention of the AFGWU, 1948, p. 123.

Miscellaneous Division, complied from union conference circulars, 1937–1947.

the old agreement until a new one is reached have achieved this result, which is clearly reflected in the union's strike relief figures.

Table 2 shows that the AFGWU has won for its skilled members a weekly wage substantially above that earned by the average manufacturing worker. The extremely low earnings of the skilled workers in 1933 reflect the fact that many members were then working only part-time under "division-of-work" rules.

Employees in the flint glass industry *as a whole*, most of them members of the AFGWU, earn less than employees in the other sections of the industry. Average hourly earnings in 1949 were $1.303 for the flint, $1.369 for the glass container and $1.454 for the flat glass workers, in contrast to $1.401 for all manufacturing workers.[17] The larger proportion of women and unskilled workers, the lesser

[17] *Monthly Labor Review*, Aug. 1950, pp. 285 and 279.

mechanization and the greater competition in the flint glass section of the industry help to explain the lower wages.

The AFGWU led the average manufacturing establishment in the reduction of working hours until passage of the Fair Labor Standards Act. AFGWU members were working approximately 51 hours a week in the 1890's, 48 hours in the 1910's, and 44 in the 1920's while "full time hours worked" in all manufacturing were 60, 55 and 51, respectively.[18]

The union has also won numerous improvements in working conditions: reduced Saturday and Sunday work, equalized overtime, limited or premium-paid holiday work, division-of-time or seniority, notice of layoffs, union shop, check off (for some), protective apprenticeship rules, paid vacations, rotation of night work, cash wage settlements, etc.

TABLE 2

Average Weekly Earnings of Skilled Members of the AFGWU and of Production Workers in Manufacturing and Percentage Comparison for selected years, 1923 to 1949

YEAR	AVERAGE WEEKLY EARNINGS		PERCENTAGE OF AFGWU EARNINGS TO MANUFACTURING EARNINGS
	Skilled Members AFGWU	Production Workers in Manufacturing	
1923	$31.08	$23.82	130%
1929	37.14	25.03	148
1933	17.90	16.73	107
1949	72.75	54.92	133

Sources: Earnings of Skilled AFGWU Members, union proceedings, 1949, p. 183.
Earning of production workers in manufacturing for 1923, 1929 and 1933 from *Statistical Abstract, 1946*, p. 210; for 1949, *Monthly Labor Review*, July 1950, p. 177.

In short, the union has secured many benefits for its members, although its success has been limited by the economic strength of the industry.

Impact on the employers: Unionization has reduced wage competition. The AFGWU has achieved a large degree of uniformity of wage rates, although individual rates above the negotiated minimum are permitted and the miscellaneous division is divided into three groups, each with a different wage level. The union also has supported a system of measured work under which labor costs can be approximately standardized. The association contracts have relieved employers of most local agitation for wage increases and have given them predictable labor costs. These efforts appear to have reduced cut-throat competition in an industry still competitive, especially in the hand plant section.

The assurance of continuous production has been very important. Organization, contract negotiations and interpretations, and jurisdictional determinations have been handled by the AFGWU with a minimum loss of plant time.

The AFGWU has developed a constructive policy on technological improvements. The union was launched in 1878 to bolster a strike against the "patent

[18] Derived from AFGWU contracts and Leo Wolman, *Hours of Work in American Industry*, Table 1, p. 2, quoted in R. A. Lester, *Economics of Labor*, p. 345.

crimper." In later years it occasionally attempted to slow the introduction of new machines by cutting wage rates. In recent years, however, its major efforts have been directed toward keeping control of the workers on whatever machines the employers might choose to introduce. The union at times has urged improved management practices which would enable firms to pay the union scale. The continual pressure of the union for economic gains may be expected to generally intensify management's search for greater efficiency.

The union serves as one excellent channel for management communication with workers. Manufacturers have enlisted the union's aid in preventing workers from "arbitrarily stopping" work to loaf.[19] The union has been helpful in conveying technical information and an appreciation of some of management's problems to the workers. Through its monthly trade circulars it assists firms in recruiting skilled workers.

The employers have found the union helpful in public relations. The AFGWU has joined the employers in protecting the interests of the industry before numerous governmental agencies.[20] The union's efforts toward higher tariffs on glassware have been especially intensive.

On the debit side, the employers have frequently complained of union restrictions on production. The old summer stop of a month to six weeks and limited turn work with low maximum standards of output were causes of conflict which, in several departments, lasted into the 1920's.

Complaints have continued. From the minutes of the negotiating sessions, they seem even to have increased in the recent conferences affecting the hand and combination plants, which employ most of the union's craftsmen. The employers contend that the standards of output are often too low. Occasionally they (and the union officials) have decried local limitations on earnings, production slowdowns, being forced to pay for "bad ware," arbitrary stopping of work, excessive rest periods and unexcused absences.

The hand and combination plants have sought relaxation of the union's limits on overtime and Saturday work. They have asked permission to operate three shifts, as the automatic machine plants do. The cutting firms have asked the right to use either piece work or day work at the company's option. Relaxations of minor apprenticeship restrictions and of jurisdictional rules have been demanded.

The union's leaders recognize that a real production cost problem exists. They are usually inclined, however, to regard the specific difficulties reported as problems for local settlement. They also contend that in many cases management is at fault. The leaders argue that the companies could increase their production if they would consult more frequently with the workers involved.

Impact on the public: Continuity of production assured by labor-management harmony and the AFGWU's constructive attitude toward jurisdictional disputes has made certain a continuous flow of glass products to the consuming public.

[19] See, for example, Rule III, pressware agreement of 1947–48.

[20] *AFGWU Convention Proceedings*, 1944, p. 383; 1946, pp. 533–534.

Since World War I the AFGWU has removed all formal restrictions on production and has long adhered to a constructive policy toward technological improvements. Such restraints on the introduction of new machines and processes as the union exercises are at least partially offset by its round-about pressure for such changes through wage and other demands. On the other hand, its indirect limitations on production, such as restricted overtime in some departments, the ban on three-shift operations in hand and combination plants, etc., have undoubtedly tended to raise costs, and prices.

The AFGWU has increased the income and presumably the purchasing power of its members, a contribution toward a healthier economy. The union has won personal rights and greater dignity for its worker-citizen members. These achievements increase the workers' stake in our society and train them in the democratic process.

The union's advances, to some extent at least, have been at the expense of the consumer. An undetermined proportion of the union's economic gains has been paid for by higher prices. The uniform wage level sought by the union and the employers somewhat reduces competition which might lower prices. If the level of wages maintained by the union drives out marginal firms and discourages new ones, this action also tends to reduce competition. Finally, if the support of the union holds up tariff rates, the consumer again loses. The importance of the glass industry in producing technical and scientific glassware for national defense, however, must be weighed when considering the costs of the tariff.

VII. *Mounting Dissatisfaction with the Present Bargaining Methods*

Criticism of the joint conference system and of the Star Island Agreement has greatly increased during the last decade. Both labor and management contend that the conferences take too much time with their repetition of arguments department by department. The union complains that only the manufacturers directly involved attend each departmental session leaving the decision in the hands of a few men immediately affected. The manufacturers in turn deplore the growing tendency to permit the results of the first departmental conferences of the year to dominate the thinking in the succeeding conferences.

Further, the employers argue that the union representatives should carry greater authority to settle; however, some union members believe that they have too much now. Union officials feel that the skilled departments, and especially the miscellaneous division, still present too many demands. Some executive board members complain about "bench warmers" among their colleagues on the negotiating committees.

But more important are the following three criticisms: First, union critics declare that the Star Island Agreement perpetuates the status quo in the employers' interest. Unless a local union has a written plant agreement, and few have, it must accept all company changes in working rules, upon which the company insists, until they are reversed in joint conference. And in the joint conference the manufacturers as a group finally decide on any changes. To remedy

this situation the union leaders have proposed final arbitration by an *impartial third party*. But the manufacturers have stoutly resisted the innovation insisting that greater efforts be put forth to make the present system work satisfactorily.

Second, is the workers' claim that the present conference system reduces the union's bargaining power. Departmental conferences allow the manufacturers to meet and defeat each group, one at a time. Furthermore, the practice of continuing work under the old contract almost nullifies all strike threats.

Third, the employers complain that their efforts to improve manufacturing practices and to protect their investments are frustrated by established rules which had their purpose years ago but which need to be adapted to modern conditions.

These expressions of dissatisfaction reflect the increasing difficulty the parties have experienced in reaching agreement in recent years. In five of the last ten years negotiations for many or all departments failed. In an effort to avoid these deadlocks the parties have experimented with four different conference groupings.

In 1943 they tried a general conference of all the departmental representatives of both sides, a body of well over one hundred men. The arrangement was simple but cumbersome. The companies contended that it stifled detailed discussion of departmental problems and made very difficult adjustments along lines of the varying ability-to-pay of the different departments.

In 1948 the final conferences were held in five sections. The mould makers, machinists and automatic machine operators in all types of plants held three separate conferences with their employers. A fourth group included the miscellaneous workers from the automatic machine and combination plants. In the last section were miscellaneous workers and the remaining skilled workers from the hand plants. These conferences produced agreements, but the arrangement was not repeated.

The February 1950 conferences departed from the traditional pattern for only two groups. The automatic machine operators and the miscellaneous workers in the *automatic machine plants* held two separate conferences with the employers and reached agreement on wage increases. These two groups in the *hand* and *combination* plants also held separate conferences, but failed to reach agreement with their employers. The result was increased intra-departmental differentials for the miscellaneous workers and the *first intra-departmental differentials for a skilled group*. The automatic machine operators in the hand and combination plants were bitter.

The regular 1950 conferences placed the workers and manufacturers in two large groups. The first included men and women from the automatic machine plants; the second comprised those from the hand and combination plants.

The outcome of these conferences was to be historic. The nearly complete failure of negotiations in 1942, 1943, and 1944 under wage stabilization had not led to strikes or great concern. But failure to reach agreement in 1949 and in the conferences continued into 1950 had contributed to growing strike sentiment in the union.

Other factors increased the tension. The miscellaneous workers with their their increased voting strength were demanding action. The cost of living was mounting and the Korean war promised further inflation. Other unions were making substantial gains. Finally, there was the threat of a wage-price freeze. The AFGWU members were "fed up" with a conservative policy which deprived them of gains which they believed could be won by striking.

The workers thus entered the July, 1950, negotiations determined to make gains, and to carry any concessions won from the automatic machine plants into the hand and combination plants in order to avoid further unpopular intradepartmental wage differentials. The NAMPBG entered these conferences under a handicap. Business in the hand plants had been blighted in the first six months of the year and some of the hand plants, at least, were hard pressed.

The automatic machine plant conference resulted in a general increase of ten cents an hour and other less important changes. The union demanded the same terms plus a few minor concessions from the hand and combination plants. These firms were willing to grant only seven and one-half cents, and an improved vacation plan in return for a freer hand in production matters. At this point negotiations deadlocked and were broken off.

On September 4 some 12,000 workers went on strike in the scattered NAMPBG hand and combination plants, the first open conflict between the AFGWU and the NAMPBG in 41 years.

The union at first rejected offers of separate settlements from association members but made numerous contracts with independent firms, in line with its last offer to the NAMPBG. In the second week of the strike, the union reversed its strategy and began to negotiate separate agreements with those association firms which would withdraw and accept the union's terms. In support of this policy, AFGWU President Harry H. Cook declared, "There has been no desire or any attempt made to disrupt and destroy the National Association of Manufacturers of Pressed and Blown Glassware. . . . We believe that it is in the interest of the industry that there be an association of manufacturers . . . but at the same time, that such an association should function in the interests of the industry and not just in the interest and for the protection of a few manufacturers."[21]

Taking advantage of this change in the union's strategy, 16 of the 50 NAMPBG members withdrew and settled with the union. Under this pressure and relieved by rapidly improving business conditions, the manufacturers reexamined their position and came to an agreement with the union which sent the men back to work on September 21. The final settlement provided for a ten-cent increase, a liberalized vacation plan and a compromise favorable to the union on the remaining issues.

VIII. *Prospects for Future Bargaining*

The pressures of the last ten years which produced the 1950 strike in the hand and combination plants have challenged the flint glass industry's conference

[21] AFGWU special letter to the membership, Sept. 20, 1950.

system. But have they undermined the fundamental factors which have produced constructive collective bargaining in the industry?

The day-to-day relationships in the plants continue to be generally harmonious. Glass workers ordinarily exhibit an understanding of production needs and the union insists on contract observance, including the no-strike provisions of the Star Island Agreement. The employers' genuine acceptance of collective bargaining and their recognition of the union's institutional needs have contributed to friendly plant relationships. The 1950 strike was an orderly one, carried out with excellent discipline. Plant maintenance and protection employees stayed on the job, and received retroactive wage increases. As a result there is no residue of bitterness which follows picketline violence and strikebreaking.

Continuing, responsible leadership in both the AFGWU and the NAMPBG has been another pillar of industrial peace. Traditionally, the principal spokesmen for both groups hold their positions for years. This is true of the present union officers and the executive vice-president and former secretary-treasurer of the association. The manufacturers have shown their respect for the union leaders by hiring for important positions, presidents Smith, Kunzler, Voitle and Rowe, as well as a number of lesser figures. The union pays especial tribute to John Kunzler, who served as secretary of the NAMPBG for more than 30 years, and to Edward J. Barry of Libbey Glass Company who was NAMPBG president during the same years.[22] The record shows that the leaders on both sides have achieved a notable degree of objectivity and have had the courage to champion policies which were then unpopular in their own ranks.

The 1950 strike understandably has made the leaders of both groups critical of some or all of the leaders in the opposing group. Their comments, however, have been very restrained. They apparently wish to avoid any personal animosities which might make future relationships difficult.

The industry's bargaining practices have contributed to peace, but necessary modifications of *procedures* at least are being made. Both groups continue to adhere firmly to the program of association-wide bargaining. They will continue to experiment with different groupings for bargaining purposes. The major stumbling block here is the varying ability-to-pay of the different types of plants. All solutions, however, seem to run counter to the principle of uniformity of wage rates so firmly held by the skilled workers.

The precedent of continuing work under the old contract, which was set in 1891, has been broken. But it was set aside reluctantly and only after failure to reach agreement in 1949 and 1950. And then an agreement might have been reached without a conflict if the conferences had been held a month or so later, after conditions in the hand plants had begun to improve.

The Star Island Agreement has been an important buttress of peace and will probably continue with no significant change. The movement to add an arbitration step appears to have lost its momentum.

The relatively equal strength of the two associations and their mutual respect

[22] *AFGWU Miscellaneous Convention Proceedings*, 1942, p. 253.

for the integrity and fighting power of the other have been a fourth cause of peace. The long and hard-fought stoppages which have occurred in the industry have shown clearly the strength and tenacity of the union and of certain employer groups. The 1950 conflict may have increased the union's relative power. The workers rallied to the support of their union, maintained proper discipline and won the strike. The NAMPBG, in contrast, proved not to be firmly united. Sixteen members pulled away to make separate agreements, and others might have followed if the association had not hurriedly made peace. Years of comparatively trouble free operation had led many association members to view it as a "service" organization rather than a "cooperative" endeavor requiring each to subordinate his desires to the needs of the group.

The union has been critical of the NAMPBG's actions in 1949 and 1950 but clearly favors having the employers organized. The NAMPBG has never been a belligerent organization, but has favored collective bargaining, a fact which the union leaders appreciate.

A final factor has been the *desire* for peace which has permeated both groups. Their own past experiences and the experiences of others have convinced most of the men and women in the flint glass industry that they can usually gain more by sincere bargaining than by work stoppages. They realize that all breaks in production reduce the industry's ability to pay both groups.

The employers have accepted collective bargaining, not because it was unavoidable, but because they have been convinced that it could make a contribution to the industry. Unionization has tended to equalize labor costs and stabilize wage rates. The union has served as an effective supplementary channel of communication with employees, and has supported the manufacturers in presenting the industry's case to the government and the consumers.

In sum, the history of the bargaining relationships between the AFGWU and the NAMPBG indicates that the rupture of 1950 will be closed. New procedures will be evolved and new attitudes assumed. The necessary education of the miscellaneous members and the new skilled members of the union will continue. The strike itself is part of the process. The lesser ability-to-pay of the hand and combination plants remains the major problem. The tradition of peaceful relationships, conservative and constructive leadership, the obvious advantages of continuous employment and production, and a renewed acquaintance with the costs of work stoppages all press the union and the association toward a constructive solution.

UNION RIVALRIES

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There are three types of rivalry among labor leaders. *The first is rivalry within a single union.* The business unionist-communist contest was part of this particular category, due to the communist policy of "boring from within." It may also be a simple contest between ins-and-outs, fighting for position and prestige without conflicting political objectives. These internal rivalries call forth every political device and tactic for achieving and maintaining power. *The second is rivalry between dual, or separate, unions claiming jurisdiction over the same workers.* The business unionist-communist contest is currently part of this category, due to the C.I.O. policy of expelling communist-led unions. Dual unions need not be engaged in *active* rivalry, and it sometimes happens that they arrive at informal apportionments of territories, which are respected and succeed in eliminating active competition. Though this is occasionally true, it represents an uneasy truce, at best. Usually, dual unions are engaged in active rivalry.[1] *The third is competition among the heads of separate unions, for preferment in the topmost brackets of the labor movement of the United States.* This competition is active in the great federations of organized labor, such as the CIO and the AFL, and is also reflected in our national political scene.[2]

TABLE 1

Union Rivalries as an Issue in Work Stoppages[3]

ISSUE	WORK STOPPAGES % OF TOTAL		WORKERS INVOLVED % OF TOTAL		MAN-DAYS IDLE % OF TOTAL	
	1940	1949	1940	1949	1940	1949
Union rivalry or factionalism	3.2	1.5	3.2	.3	2.2	.2
Jurisdiction	3.1	2.6	1.4	.7	.9	.3

EXTENT OF UNION RIVALRIES

Table 1 indicates that work stoppages directly involving factionalism or union rivalry or jurisdiction are not an important element in the statistics of labor-management conflict. Further, they have declined significantly in importance during the past decade. The *Monthly Labor Review* remarks this when it states,[4]

[1] See Walter Galenson, *Rival Unionism in the United States.*

[2] A. M. Ross, "Wage Determination Under Collective Bargaining," *American Economic Review*, Dec. 1947, pp. 811–812.

[3] 1940 figures from *Handbook of Labor Statistics*, 1941 edition, Vol. I, p. 327. *Monthly Labor Review*, May 1950, p. 503 for 1949 figures.

[4] *Monthly Labor Review*, May 1947, p. 795. Italics added.

Stoppages arising over interunion or intraunion matters, which included issues involving sympathy, union rivalry or factionalism, and jurisdiction, remained comparatively low, but *they*, nevertheless, *attracted considerable public attention. The spotlight*, in particular, *was focused on those disputes which* were not directed against employers but *were primarily conflicts between union groups*, generally called "jurisdictional strikes." The Bureau classifies these disputes as rival union strikes (those between unions of different affiliation) and jurisdictional strikes (those between unions belonging to the same affiliated body).

However, it is necessary to avoid under-emphasizing the importance of rivalries. Actually, the Bureau of Labor Statistics underestimates them. Thus, the *Handbook of Labor Statistics* remarks in a footnote:[5] "It is probable that the figures here given do not include all jurisdictional strikes. Owing to the local nature of these disputes, it is difficult for the Bureau to find out about all of them."
Along this line, the *Monthly Labor Review* remarked that:[6]

> Even these economic factors, if accurately appraised, do not take into account the human element—the psychology of the workers, the attitude of the employer, *the strategy and tactics of union leaders—which, at times, may substantially determine which particular issue, or group of issues, will emerge as the hard core of the controversy.*

It must be remembered too that union rivalries breed especially bitter and complex collective bargaining problems. Additionally, the relative unimportance of union rivalries in the total statistical picture of work stoppages may obscure critical cases which vitally affect the public welfare.

RIVALRY WITHIN A SINGLE UNION

This type of leadership rivalry assumes two aspects. *First, in newly organized unions, there is a struggle for power among ambitious neophytes. Second, once certain leaders have emerged, they face the danger of a cleavage developing between themselves and the rank and file. Ambititious opponents can capitalize on such estrangement.* It is pertinent to ask: What kind of labor leaders emerge from this competition?[7]

As a rule, emotional and militant types of men come to the fore in newly organized unions. On the other hand, the successful bargainer and administrator, the man with much business acumen, is likely to rise to the top when a union has become stable, and has maintained acceptable bargaining relations with the employers. The "good fellow," the hail-well-met type, achieves considerable support, particularly when militancy is at low ebb.

[5] *Handbook of Labor Statistics*, Vol. I, 1941 edition, p. 327.

[6] *Monthly Labor Review*, May 1947, p. 794. Italics added.

[7] H. A. Millis and R. E. Montgomery, *Organized Labor*, pp. 247, 248. Racketeering has always been inflated. Actually, racketeers have organized, controlled and led few labor unions from their inception. Usually, racketeers arise in unions which were organized legitimately.

There is a close kinship between the type of leaders on the management side and those on the labor side. When unionism is resisted fiercely by employers, fighters will come to the front of the labor forces. Similarly, reasonable employers encourage the emergence of reasonable labor leaders, who lean towards labor-management cooperation. The rule, of course, works both ways.

In any event, the natural leaders, those with a love of power, strive to rise to the top. Mediocrity tends to be shunted to one side and to make way for the more vigorous men.

Leadership rivalry is reflected in collective bargaining. "Regardless of the form of rivalry, the wage rate and the wage increase are paramount symbols of success. The more intense is leadership competition, the more certain it is that comparisons will be played upon for all they are worth. Practical politics and personal animosities combine to make this the one situation in which workers are assured of 'full knowledge.'"[8]

DUALISM

Unions, with conflicting jurisdictional claims over the same workers, have been a feature of the American trade union scene. *Dualism has existed on two levels. First, there is the lower level of jurisdictional conflict between unions affiliated with the same federation.* An example is the old struggle between the Brewery Workers and the Teamsters, for jurisdiction over brewery drivers. Both are AFL affiliates. Another is provided by the conflicting jurisdictional claims among AFL affiliates in the Hollywood cinema studios. A casual reading of the proceedings of any AFL convention will provide many more cases. For example, the 64th convention, held in 1944, dealt with jurisdictional struggles among the following unions: (1) The Brotherhood of Railway Clerks *versus* the Order of Railroad Telegraphers; (2) the International Molders and Foundry Workers Union of North America and Metal Polishers, Buffers, Platers and Helpers International Union, jointly, *versus* the United Automobile Workers of the AFL; (3) the Seafarers International Union of North America *versus* the Canadian Seamen's Union; (4) the International Jewelry Workers Union, which called upon the convention to pass a resolution denying a charter to the American Watch Workers Union (a rival organization organized by Walter W. Cenerazzo, former member of the IJWU); and, (5) the opposition of the Progressive Mine Workers to reaffiliation of the United Mine Workers. Some of these quarrels ended in the courts. Federal locals, chartered directly by the American Federation of Labor, are also occasional sources of jurisdictional strife, because they are usually industrial unions which cut across craft lines.[9] This is true despite their supposedly temporary character.

The Congress of Industrial Organizations is marred also by judrisdictional conflicts among its affiliated internationals. Some well known pre-expulsion examples are provided by the United Automobile Workers *versus* the United Farm Equipment and Metal Workers, and the United Electrical Workers and

[8] A. M. Ross, *op. cit.*, p. 812. See also, *How Collective Bargaining Works*, p. 106.

[9] Millis and Montgomery, *op. cit.*, footnote 1, p. 193, pp. 203–205.

United Paper Workers, jointly, *versus* the United Office and Professional Workers of America. There are many other cases.

The second level of dualism is that between the great federations, the CIO and the AFL. To these two has been added the newly formed federation of some CIO expelled communist unions.[10] It is, in turn, reflected in dualism between affiliates of each federation. Each federation charters unions in identical areas. Consequently, there is overlapping jurisdiction between affiliates of the major competing federations, in addition to that between affiliates of the same federation. In both instances, jurisdictional conflict has been marked by intense bitterness.

Dualism originates in these causes. *First*, the historical development of American trade unions from craft organization toward industrial organization. *Second*, the tendency for opposition elements, within a union, to break away and form dual organizations, if they cannot achieve power within the original union. The formation of the Amalgamated Clothing Workers of America, from the older United Garment Workers, is a famous example. However, these splits may be balanced by amalgamations of unions which were formerly dual. An example is the United Hatters, Cap and Millinery Workers International Union, which joined the Hatters with the Cap and Millinery Workers. *Third*, the development of new industrial techniques. New materials are an additional influence. For example, advancement in techniques and materials have caused jurisdictional conflict in the construction unions.

For a time it seemed the Taft-Hartley Act would encourage a sharp increase in jurisdictional conflict. Section 9 (b) (2), concerning the question of union certification by the National Labor Relations Board states:

> The Board shall decide in each case whether, in order to assure to employees the fullest freedom in exercising the rights guaranteed by this Act, the unit appropriate for the purposes of collective bargaining shall be the employer unit, craft unit, plant unit, or subdivision thereof: Provided, That the Board shall not (1) . . . ; or (2) decide that any craft unit is inappropriate for such purposes on the ground that a different unit has been established by a prior Board determination, unless a majority of the employees in the proposed craft unit vote against separate representation . . .

This appeared to be an open invitation to craft unions to attempt capturing the workers of their own craft from the giant industrial unions. They could attempt it by filing applications for representation elections, with regional branches of the National Labor Relations Board, despite previous certification of an industrial union as bargaining agent. The AFL Pattern Makers union used this provision of the law to take the pattern shop, at Kaiser-Frazer's Willow Run plant, from the CIO United Automobile Workers. The lure was the higher pay obtained by the AFL affiliate for its craft members. Pattern makers are a strategic group who can bargain more effectively for themselves when not tied down by general wage adjustments.

[10] *Monthly Labor Review*, Nov. 1950, pp. III, V. In Chicago 8 ex-CIO unions formed a "Labor Unity Council." These merger efforts of left-wing unions are still in their infancy, and must be assessed against the disclaimers of left-wingers that they have any intention of establishing a nationwide federation. *Business Week*, Dec. 9, 1950, p. 92.

The National Labor Relations Board established a precedent in an important decision which ended the threat, at least for the time being. In a case involving the Bricklayers Union, AFL, and the United Steelworkers, CIO, the NLRB ruled in favor of the latter. The *New York Times* reported the case as follows:[11]

> The National Labor Relations Board, . . . , denied today a craft union's request for separate elections in two steel plants, . . .
>
> . . . , the board rejected the argument of the American Federation of Labor that the new law required separate units for skilled craftsmen whenever they desired it.
>
> The issue, as stated by the board, was "whether the amended act requires or shall induce the board to conduct an election among certain bricklayers in order to afford them an opportunity to sever themselves from a long-established industrial unit in the basic steel industry."
>
> The petitioner was the Bricklayers Union, AFL. It sought separate bargaining units for bricklayers at the National Tube Company plant, Lorain, Ohio, and the American Rolling Mills Company, Middletown, Ohio, where all the production and maintenance employees are represented by the United Steelworkers, CIO, and the Armco Employees Independent Federation, Inc., respectively. The two plant-wide unions and the managements opposed the bricklayers' petitions.
>
> If the board had granted the elections the decision would have been the first step toward the possible establishment of craft bargaining units in the steel industry, where collective bargaining is mainly on a plant-wide or company basis.
>
> The unanimous decision held that the new law left the determination of such units to the discretion of the board, though that discretion was now limited in one respect: that the board still may consider the bargaining history in the industry or even in the plant involved . . .
>
> The board indicated that the two factors given greatest weight in denying separate units for the bricklayers in the two steel plants were the close integration of their work with the whole steel-making process and the relatively long history of plant-wide bargaining in the industry.

There are many examples of the relationship between dual unionism and collective bargaining. George Soule, in his book on Sidney Hillman, devotes many pages to the effect of the split between the United Garment Workers and the Amalgamated Clothing Workers of America on collective bargaining negotiations by the two unions. Dr. Arthur Ross has provided some recent examples and commented on their meaning.[12] In large terms, Professors Millis and Montgomery have commented on the rivalry between the AFL and the CIO, and its effect in increasing the size of the American labor movement.[13]

The basic point is: comparisons are manipulated by union leaders for political purposes. They can be used also by employers. As a matter of fact, political manipulation of comparisons is an important consideration in collective bargaining. Briefly, in a contest of rival unionism, it is a political advantage for a labor leader to break out of the established orbit. The employer may accord better treatment to the union he prefers. This is a costly device if the dual union is able

[11] *New York Times*, April 9, 1948.
[12] A. M. Ross, *op. cit.*, pp. 811 *et seq.*
[13] Millis and Montgomery, *op. cit.*, pp. 195, 201, 222.

to restore the equilibrium. Unfortunately, employers do not always appreciate that "divide and conquer" can be an expensive policy.

Aggressive unions, headed by ambitious leaders, attempt to become "front runners." The meat packing dispute of early 1948 is an excellent case.[14] An ambitious labor leader, Ralph Helstein, attempted to break out of a CIO-AFL wage equilibrium. The employers used the AFL unions as a "stalking horse," to establish a pattern for the United Packinghouse Workers. Prior to the strike deadline of March 16, Swift and Company ran a series of whole-page advertisements in leading metropolitan newspapers entitled: "CIO Calls Strike at Swift Meat Packing Plants—*Why?*". The advertisement's text went on:[15]

> Effective March 16, the CIO-United Packinghouse Workers' Union has called a strike in 24 meat packing plants operated by Swift & Company. The reason: to try to enforce their unreasonable demands for *29 cents* an hour increase, later reduced to 19 cents. *40% of all our meat packing employees have already signed for an increase of 9 cents an hour, effective January 12, 1948.* These employees, in 18 other plants, are represented by the AFL-Amalgamated Meat Cutters and Butcher Workmen and the National Brotherhood of Packinghouse Workers. *These agreements were negotiated without strike threat. The acceptance of this 9-cent increase by the two unions indicates that they consider it fair and reasonable.* The accompanying charts show why 9 cents is a liberal adjustment of wages. *A strike is unnecessary.* It is regrettable that the CIO union has decided on a course of action which will result in loss of wages and production, and will disrupt the normal services of our company to livestock producers and consumers.

The employers were successful. The United Packinghouse Workers finally settled on the employers' terms, after suffering a severe defeat. As a consequence of this experience, the AFL and CIO unions have since engaged in joint bargaining with the meat packers.

TOP BRACKET LABOR RIVALRIES

Perhaps no man serves as a better example of how personal ambition to reach the apex of labor leadership influences collective bargaining than John L. Lewis. His conduct of collective bargaining for the United Mine Workers is part of his campaign to achieve this objective. An example is the manner in which he settled the 1948 coal dispute.

Settlement of the six-week 1948 strike reeked with national and labor politics. Speaker of the House Martin served as mediator. Through his good offices, a friendly "neutral" was obtained to serve as a trustee of the miner's welfare fund. The "neutral" person was Senator Styles Bridges, who subsequently sided with Lewis in every decision taken by the fund's trustees.[16] At the time, Martin was a contender for the Republican presidential nomination. His peace role in the miner's strike was a publicity man's dream, since it emphasized Martin as a modern Solomon in the field of labor relations, who settled a dispute which was

[14] *Newsweek*, March 29, 1948, p. 25.

[15] Italics added.

[16] The Lewis-Bridges relationship reached the divorce stage during the 1949–1950 bituminous coal controversy.

threatening the well-being of the United States. By implication this damned the labor policies and tactics of the Democratic administration, which Lewis has been warring against since his "falling-out" with Franklin Roosevelt in 1940.

John L. Lewis' tactics have had an effect on his fellow labor leaders. When Lewis was negotiating for the re-entry of the United Mine Workers into the American Federation of Labor, in 1944, the Progressive Mine Workers fought reaffiliation bitterly. Their opposition brought delegate Duffy, of the Operative Potters Union, to the floor of the convention hall to make these interesting and significant remarks:[17]

> Personally I would like to see John L. Lewis back in membership in the American Federation of Labor. I am going to be frank with you. I hear many, many members sitting around this hall and in the hotel corridors and other places deploring the lack of force and fight and militancy and determination in things pertaining to the American Federation of Labor's duty and obligation in its objective to bring to the rank and file the things they have a right to expect. I have heard many of you delegates say, as I personally have said in private and I want to say here now in public, that I think we need the force of John L. Lewis in the American Federation of Labor, ...

This, of course, was prior to Lewis' re-entry into the AFL and his subsequent second disaffiliation.

Lewis' consuming ambition to mount the summit of American labor leadership has been recognized widely. Judge Goldsborough, who had Lewis as a frequent visitor before the bar, remarked, "It's your boundless audacity, O Catiline."[18] Of greater practical importance to other labor leaders, as a symbol of Lewis' ambition, is his United Mine Workers' catch-all district 50. Lewis, no longer affiliated with either of the great labor federations, will organize any group of workers in district 50.

The 1944 convention proceedings of the American Federation of Labor stated, in its discussion of the negotiations for the reaffiliation of the United Mine Workers:[19]

> . . . at these conferences President Lewis proposed that the United Mine Workers of America, which includes District No. 50, should be readmitted to affiliation with the American Federation of Labor as they were. He agreed to settle any jurisdictional dispute which might arise, after reaffiliation of the United Mine Workers with the American Federation of Labor had been consummated. Your committee proposed that jurisdictional questions be settled before said reaffiliation took place. It was impossible to reach an agreement upon this disputed question.

The proceedings disclosed further that Lewis proposed a four point compromise: (1) the AFL take back the UMW as is, (2) any jurisdictional problems be settled directly with the internationals concerned, (3) if no agreement could be arrived at, the dispute would then go to the Executive Council of the AFL,

[17] *Proceedings*, AFL, 64th convention, pp. 477 *et seq.*
[18] *Time*, June 14, 1948, p. 17.
[19] *Proceedings*, AFL, 64th convention, p. 122.

whose decision would be final, but (4) this arrangement was not to apply to the chemical workers in district 50. The chemical workers were the largest block of workers organized in district 50. When the AFL countered by proposing that the chemical workers in Lewis' district 50 be merged with others in the AFL into a new international union, which the AFL would charter, Lewis refused and the negotiations broke down.

Following this temporary breakdown in the negotiations, he wrote the following letter to the AFL. It clearly demonstrates the predominance of political factors in Lewis' thinking.[20]

Press reports reveal that the Executive Council of the American Federation of Labor has again with characteristic servility to the Roosevelt Administration failed to take affirmative action with respect to the pending application for reaffiliation by the United Mine Workers of America, dated May 17, 1943.

Solely with the desire to make a contribution toward the constructive unification of American labor, the United Mine Workers of America, a year ago, filed its application for reaffiliation with your Council. Throughout this period of a year, the majority of the members of your Executive Council have lacked the courage to either vote "Yes" or vote "No" on the question of acceptance. Instead they have constantly muttered and mumbled and indulged in fearsome incantations over the fallacious and hoary question of jurisdictional rights. It is an amazing exhibition of base hypocrisy approximating moral turpitude.

It is, of course, publicly known that certain members of the Executive Council have been given imperative instructions to refuse admittance of the United Mine Workers of America to the American Federation of Labor by the New Deal politicians who are opposed, for political reasons, to unity in the ranks of labor. This is a continuance of the opposition of the New Deal managers as exemplified when the United Mine Workers of America proposed merger of the C.I.O. and A.F. of L. in February, 1942.

Every well-informed person in Washington knows the identity of the New Deal executives and the members of its Palace Guard, as well as the identity of the individual members of the Executive Council, who from time to time during the past year have clandestinely counselled together to insure the consummation of their shameful plans to betray the interests of the men and women of labor. The members of the Executive Council by their dishonorable intrigue have permitted the American Federation of Labor to become the puppet of a political organization, and, in fact, to achieve the status of a political company union.

Will you please without further procrastination or hypocrisy return to the United Mine Workers of America the application for reaffiliation dated May 17, 1943, together with check for per capita tax which accompanied the application.

In view of Mr. Lewis' wanderings in and out of the two great federations of American organized labor, one may be pardoned for questioning the assertion that the application was filed "Solely with the desire to make a contribution toward the constructive unification of American Labor,. . . ." Mr. Lewis' negative role in earlier negotiations for achieving the "organic unity" of the CIO and the AFL is too well known. The mantle of an unbiased prophet of labor, seeking only the advancement of the common working man, does not fall too gracefully

[20] *Ibid.*

over his shoulders. John L. Lewis has accomplished a great deal for the coal miners. He has contributed great and lasting work to the laborers of the United States in their struggles for a better standard of life. He is a most accomplished man, almost a man of genius. But, he is also a man of tremendous personal ambition, with a vast love for power. The last has been an important force in accounting for his achievements. It also accounts for those actions which have been deterimental to the cause of organized labor.

He has provided more ammunition than any other labor leader to those who proposed punitive legislation, which would circumscribe the powers and freedom of organized labor. Much legislation, proposed and passed, is due in great measure to his conduct of collective bargaining negotiations on behalf of the miners. Examples are the Smith-Connally Act, the Case Bill, and the Taft-Hartley Act. John L.'s ambition has proved a mixed blessing for American Labor.[21]

RIVAL DUALISM AND EMPLOYERS

An employer may use one of two rival unions as a front runner, in order to establish a pattern of settlement in collective bargaining. This was brought out in the meat packing case. For a variety of reasons, employers may prefer one union as against its rival. Where such preference exists, they may do many things to aid the union of their choice, viz., (1) adjust grievances more readily with the favored union, (2) permit one union to solicit members on his premises and refuse this privilege to another, (3) solicit on behalf of one union as against another, (4) distribute membership cards for the favored union, (5) discharge employees who fail to join the desired union, (6) grant a *de facto* closed shop to one union under discriminatory circumatances, and (7) furnish facilities to the union of his liking which he refuses to another (such as the use of company bulletin boards, mimeograph machines, stenographic services, and office space). The list may be extended indefinitely. Some of these practices are clearly illegal. However, it is still possible for a determined employer to make his employees aware of his choice in a union. It may be observed that in the long struggle between the AFL and the CIO, the former had the tremendous advantage of usually being favored by the businessman.[22] In this connection, it is worth observing that rival dualism and inter-union jealousies are related to the character of the bargaining unit.[23]

Although employers may play a part in favoring one union against another, it has oftentimes happened that they are caught innocently between two competing unions. Suppose an employer has a collective bargaining agreement with

[21] Most recently, Mr. Lewis involved himself in an internal struggle in the United Automobile Workers, CIO. The *New York Times* remarked: "John L. Lewis moved into Detroit today and threw his weight behind the opponents of Walter P. Reuther, president of the United Automobile Workers, C.I.O., in the dispute that has divided the automobile union . . . . The attack on Mr. Reuther's policies, notably the five-year escalator contracts negotiated last year, was opened by Carl Stellato, president of Local 600. . . ." *New York Times*, June 24, 1951.

[22] Walter Galenson, *op. cit.*, p. 40 *et seq.*

[23] Millis and Montgomery, *op. cit.*, pp. 539–542. Also: J. T. Carpenter, *Employers' Associations and Collective Bargaining in New York City*, pp. 140–141.

one union, and a rival union demands that he deal with them in its place. Acquiescence on the part of the employer is sure to cause a rupture with the first union. Refusal of the second union's demands may result in that organization picketing the employer's place of business, with consequent economic loss.[24]

Because of vigorous rivalry between unions, labor leaders attempt to achieve union security provisions in the collective bargaining contract. Security clauses are a powerful political lever against rival union leaders, who are trying to invade the rank and file membership. In many instances, labor leaders are willing to exchange short-run economic concessions for union security. Of course, union security clauses, by granting a monopoly over labor supply, increase the subsequent bargaining power of labor leaders for economic ends.[25]

METHODS OF SETTLING JURISDICTIONAL DISPUTES

Although union rivalry is serious when it occurs, strife is not the normal condition. What usually occurs is a period of bitter, unrelenting struggle, waged with every tactic at the contestants' disposal, culminating in eventual establishment of an equilibrium. This equilibrium is fragile and subject to stress, but it must be achieved as a point of rest between opposing forces. There are several methods of achieving it. Some are:

1. The destruction of one of the contestants.
2. Amalgamation of the two rival unions into a new entity.
3. Agreements, usually informal, between the rivals which allot areas for each in which its competitor will not be active.
4. Labor federations, which issue charters granting jurisdiction, and settle conflicting jurisdictional claims at conventions.
5. Government agencies, such as the courts and various labor boards, which resolve rival union claims. The election procedures prescribed in the National Labor Relations Act, both the original and the amended 1947 version, as well as their state counterparts, have been important in settling the conflicting claims of rival unions.
6. Impartial umpires, who may be appointed by rival unions to settle jurisdictional disputes arising among them. The *New York Times* reported a case involving the building and construction industry, long scarred by bitter and violent jurisdictional conflict.[26] It stated:

John T. Dunlop of Harvard University has been designated chairman of the board

[24] Millis and Montgomery, *op. cit.*, pp. 627–629.

[25] Walter Galenson, *op. cit.*, has provided a list of the weapons used by unions against one another. He notes weapons which are available to all unions, as well as those available to unions through affiliation with a national federation. The weapons available to all unions are: providing "scabs," striking, picketing, physical violence, "smearing" rivals, concessions to an employer to win his support, and bribery of rival unionists. The weapons available through affiliation with a national federation are: the boycott, the union label, the support of affiliated transport unions, sympathy strikes, joint closed shops by craft unions for protection against industrial unions, and the appeal to the federation for support against a raiding affiliate.

[26] *New York Times*, April 9, 1948.

of trustees and impartial umpire under a newly devised plan to avert jurisdictional strikes in the building and construction industry.

The union jurisdiction machinery was worked out in the past few months by the building trades department of the American Federation of Labor, the Associated General Contractors and various specialty contractors associations. Mr. Dunlop is understood to have participated in the planning.

The general counsel of the National Labor Relations Board was an interested observer of the planning because of the Taft-Hartley Law's section governing jurisdictional disputes. It is expected that the joint union-contractor plan will minimize the need for NLRB intervention in jurisdictional disputes.

The board of trustees established by the plan will be open for business on May 1. Requests for decisions will be accepted from international unions and individual contractors or contractor associations employing union members affiliated with the American Federation of Labor building trades, provided they agree to abide by decisions.

When requests for decisions come in, the trustees will decide whether any new issue or principle is involved. If the principle already has been determined by a decision of record, the case will be terminated at that point. If not, the dispute will be referred to a joint board composed of two representatives of the unions and two representatives of the employers and the chairman.

The union and management members of joint boards will be chosen from pools of twelve persons from each side. Mr. Dunlop will be chairman of the board set up in every dispute.

The agreement signed by the principals provides that there shall be no stoppages of work in jurisdictional disputes and that principles established by joint board decisions shall be binding on local jurisdictional boards.

CONCLUSION

There are several evils in union rivalries. *First*, they lead to jurisdictional contests, which may harm innocent and neutral employers as well as the public. *Second*, they limit the extent to which unions can discipline their members and make their commitments effective. *Third*, they limit the effectiveness of the labor movement in influencing the course of public affairs. *Fourth*, they result in unsympathetic publicity, which whips up sentiment in favor of punitive legislation. Such legislation may be harmful to the cause of legitmate, responsible trade unionism.

Despite these bad features, the advantages of leadership competition have outweighed the disadvantages. The eternal struggle to achieve leadership has prevented slothfulness and decay from seizing labor leaders permanently. The union leader who wishes to retain his position, and almost all do, must be alert to opposition elements. The would-be leader, who desires to unseat him, must be awake to every opportunity for achieving this objective. Both must make their appeals finally to rank and file. This is to the best interest of the rank and file. Rival dual unions also place in the hands of the rank and file workers a choice between alternative unions and union leaders. The desire of each to win the affiliation of the workers guarantees their best efforts to achieve more than their rivals for the rank and file. Even top bracket rivalries have an advantageous

aspect, for they have been partly responsible for the organization of the unskilled in the mass production industries.

In any event, it appears plain that one of the six methods of settling the issue of rival unionism is of increasing fundamental importance. Government agencies, during and since the recent war, have been growing in importance in the settlement of labor disputes. This is indicated in the following table:[27]

% of Total Work Stoppages Terminated Through Gov't Agencies

YEAR	STOPPAGES	WORKERS INVOLVED	MAN-DAYS IDLE
1940	42.7	58.7	69.8
1946	53.3	74.3	79.1

This is a fact of great political importance. Government activities are becoming a matter of life and death to the vested interests of labor leaders. Therefore, we must expect labor leaders to do everything in their power to influence such government activities in their favor. Action inevitably means growing labor participation in local, state, and national politics. Whether desirable or not, it arises logically from the facts of present day life. If the government influences union existence, then labor leaders must seek to influence the character and politics of the government.

[27] *Handbook of Labor Statistics*, Vol. I, *op. cit.*, p. 329 and *Monthly Labor Review*, May 1947, p. 799.

THE NATURE OF INDUSTRIAL COOPERATION*

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The literature of industrial relations is replete with commentary on the desirability of cooperation and the means through which to achieve it; yet nowhere is its exact nature examined. The term cooperation carries at least three different connotations. Economists simply mean a division of labor accomplished by an exchange mechanism. Industrial relations experts with a management bias, designated as the "scientists" in this paper, seek techniques to *make* people do what they want them to do and call this cooperation. The "institutionalists," so-called in this paper because of their emphasis upon history and institutional development, use the term in the special sense of free men and free groups voluntarily giving their consent to work together. As organized economic groups grow ever larger, the automatic price mechanism so dear to laissez faire economists breaks down as a means of maintaining sustained cooperation. To remove the threat of industrial conflict the "scientists" have sought *natural laws of cooperation* to replace the law of supply and demand. In contrast, the "institutionalists" would replace the law of markets with industrial and political common law aided by special institutional developments. This paper will examine these three approaches to industrial cooperation.

COOPERATION BY FREE ENTERPRISE

Adam Smith dwelt at length upon the increased productivity resulting from the division of labor. He concluded that the increase in total national product alone made cooperation worth-while.[1] Laissez-faire economists assumed cooperation to be the result of decisions made by free men among alternative opportunities in an atomistic economy. The profit motive provided an inducement for greater specialization—greater cooperation—as it increased efficiency. The entrepreneurs demand schedule for labor constituted their offer to cooperate with labor. Laborers weighing alternative job opportunities and the desire for leisure against their desire to consume arrive at a supply schedule for labor. The resulting market wage is the basis for cooperation.

If a worker does not like the terms of employment, he is free to quit, to cease cooperating. Freedom is limited by the threat of starvation, however, causing the worker to "voluntarily cooperate"[2] at the market wage. Similarly, an employer who feels he is not receiving cooperative efforts commensurate with the wage paid may also end the contract. Selfishness is tempered by the market.

* The writer wishes to express his indebtedness to Professor Lawrence Ritter for his helpful suggestions.

[1] Adam Smith, *Wealth of Nations* (Modern Library ed.), pp. 3–20.

[2] This paper will attempt to avoid the philosophical conflict over the extent of free will by using voluntary to mean taking advantage of alternative choices, limited as they may be, afforded by the market.

Cooperation becomes a commodity whose price is set by the laws of the market. As a generalization, J. S. Mill believed voluntary cooperation of free men to be superior to slavery. This type of cooperation is only a special case, however, and Mill noted that there are circumstances when "compulsory cooperation,"—division of labor—would be superior.[3] If the *unseen hand* fails to achieve cooperation, we may have to resort to other means in the interests of the survival of society. From the economist's standpoint, there are many ways of gaining cooperation besides on a voluntary basis.

With his usual flair for discovering paradoxes in the economic system, Karl Marx found a contradiction in free enterprise manner of cooperation which would lead to its downfall.[4] Marx reasoned that the growth of capitalism was also the growth of cooperation. Greater cooperation (division of labor) makes labor more dependent and requires a "directing authority" (management) to coordinate the work of a multitude of specialists. The directing authority will extract the maximum amount of production from an increasingly dependent (proletarianized) labor force.

The greater the cooperation, therefore, the greater the exploitation. Capital will deal harshly with labor's resistence to exploitation. Cooperation will inevitably lead to despotism. Marx failed to reckon with the growth of free labor unions and protective labor legislation which has prevented the despotism he predicted. Although not a dialectician, Alfred Marshall also noted some alarming aspects to cooperation.[5] Marshall uses the word in a new context, introducing the idea of collusion. Men act in concert, and competition is no longer a controlling factor. The price mechanism fails to restrain selfishness. Cooperation is *within* special interest groups, and serious conflict is likely in the clash of organized economic groups. National planners in Welfare States are now facing such a syndicalist pressure from special interest groups which threatens to upset planned cooperation. Radicals of the Henry Simons tradition would escape the dilemma of the pains of planning versus monopolistic exploitation by destroying existing economic institutions, returning to an economy where division of labor is not as intensified, and achieving cooperation through competitive prices. The despotism predicted by Marx has largely been avoided; few are willing to take drastic measures to restore a truly competitive economy, and thus our problem becomes one of obtaining cooperation between economic power groups.

[3] John S. Mill, *Principles of Political Economy* (London: Routledge & Sons, 1900), pp. 88–100. Mill states that where supply of labor is scarce, where tasks are menial, and where cooperation cannot be bought with money, it may be more profitable to institute slavery.

[4] Karl Marx, *Capital* (Modern Library ed.), pp. 353–367.

[5] Alfred Marshall, *Principles of Economics* (8th ed.), pp. 5–9, observed that modern production methods increased our interdependence, and hence our need for greater cooperation. Cooperation in collective action and in collective ownership, he continued, can be a force for good or evil. The cooperation of businessmen (and of labor leaders, he may have added) requires socially virtuous men. Accordingly, Marshall warned that the supreme aim of economists is to discover how the latent social talent of unselfish cooperation can be developed most quickly. It is in this sense of the word that the institutionalists seek ways of securing cooperation.

THE "SCIENCE" OF COOPERATION

Management has long been aware that the price mechanism fails to secure complete worker cooperation. In the cold war of the factory, workers do as little as possible short of being discharged while management attempts to speed up production short of precipitating a strike. Within these limits both conflict and cooperation exist.[6] Accordingly, management has hired the services of labor relations specialists for the purpose of scientifically securing maximum cooperation from workers.

The founder of Scientific Management, Frederick Winslow Taylor, contended that the fundamental cause of industrial conflict was the lack of knowledge of what constituted a fair day's work and a fair day's pay. The price mechanism failed to establish a wage for a given quantity of labor effort at which cooperation could be achieved. Taylor believed he could scientifically establish these variables with time study and incentive systems. So accurate were these techniques that they were thought to be natural laws which could not be challenged by either management or labor. When natural laws replace the unscientific law of markets, cooperation, it was believed, would naturally follow.[7]

No absolute measure of labor effort has actually been discovered, however, and present industrial engineers are modest as to the accuracy of their techniques.[8] More important, no natural law of distribution of national income has been discovered. The mutual advantage accruing from exchange is agreed, but it is the *ratio* of exchange that causes disagreement.[9] Without a self-equilibrating economy to distribute income, conflict over relative shares may reduce the total product available for sharing.

Engineers brushed this aside by emphasizing the natural harmony in society.[10] The interests of capital and labor are alike because neither can exist without the other. Total output is the major problem, and if conflict over sharing is held in abeyance to concentrate on production, there will be plenty for all. Despite the reasonableness of this analysis, restriction of output continues, overproduction is feared, and curiosity remains as to how the national income will be divided.

Industrial engineers have been criticized for their mechanistic approach to the problem of cooperation, and industrial psychologists point out that human

[6] Frederick W. Taylor, *The Principles of Scientific Management*, p. 10; Henry L. Gantt, *Work, Wages, and Profits*, p. 19.

[7] Frederick W. Taylor, *op. cit.*, p. 143, Frank B. and Lillian M. Gilbreth, *Applied Motion Study*, pp. 3, 4, 28, 159. Robert F. Hoxie, *Scientific Management and Labor*, p. 40, recalls Taylor's remark that one may as well bargain over the time the sun will rise as to bargain over scientifically established wages. For the Taylor Society's definition of the natural laws of cooperation, see *Scientific Management in American Industry*, (H. S. Person, ed.), p. 11.

[8] See Ralph Presgrave, *Dynamics of Time Study;* William K. Louden, *Wage Incentives;* Stanley B. Mathewson, *Restriction of Output Among Unorganized Workers*, Chap. 5; and William Gomberg, *A Trade Unionist's Analysis of Time Study*.

[9] Kenneth E. Boulding, *Economic Analysis*, pp. 34-38.

[10] Henry L. Gantt, *op. cit.*, pp. 29, 52.

behavior is also a factor in cooperation. Nor is the pleasure-pain calculus of the classical economists so penetrating a study of behavior as to explain the nature of cooperation. Management psychologists,[11] in the behaviorist tradition, plunge deeper into the subject for the purpose of controlling worker behavior according to the employer's wishes.[12] The object is to discover laws of human behavior. These laws are based upon the assumption that all behavior is a complex reflex action, or stimulus response situation. All that is needed is to observe and classify industrial stimuli response patterns, and then weed out stimuli producing uncooperative responses while developing stimuli which give cooperative response.[13] Although much of the literature claims this to be the goal of management psychologists, there is no evidence that laws of industrial behavior have been established. The brave-new-world approach of the "rat psychologists" neglects the ability of workers to learn from experience, to communicate experience to others, and thereby vary the response to stimuli. Nevertheless, management psychologists continue to strive for cooperation by creating the proper worker "attitudes," by "conditioning" workers, by the right "selection and placement," by creating the desired "environment," by developing "loyalty," by correctly "motivating" workers, and by treatment of "maladjusted" workers. Within limits workers may be so manipulated, but scientists cannot *make* workers cooperate according to employers' wishes.

Psychologists point out that modern production methods themselves may also be a cause for faulty cooperation. Mass production technique affords little opportunity for initiative, creativeness, and self-expression that humans seem to possess. On the contrary, industrial work is characterized by dull, monotonous, repetitive routines with few outlets for ego-building self-expression. To bring the industrial system more in harmony with the psychological needs of mankind, however, may possibly be in conflict with the goal of greater efficiency and further division of labor. Management psychologists, who assume that workers can be molded to their environment,[14] propose that workers be "adjusted" or "adapted" to the work process. This is the "human engineering" approach to cooperation. Although workers have not yet been successfully fitted to jobs, if given more time and under a Hitler or Stalin regime such a project might gain its objectives. In the existing social order, the positive contribution of industrial psychologists has been in fitting jobs to workers.

[11] The designation management psychologists is used here to distinguish them from other industrial psychologists who hold different views.

[12] Hugo Münsterberg, *Psychology and Industrial Efficiency*, p. 43, defines industrial psychology as efforts ". . . producing most completely the influence on human minds which are desired in the interests of business."

[13] See Gordon S. Watkins and Paul A. Dodd, *The Management of Labor Relations*, p. 86. Herbert L. Moore, *Psychology for Business and Industry*, p. 249, says workers must be guided and directed to eliminate undesirable conduct and to encourage desirable conduct.

[14] Norris A. Brisco, *Economics of Efficiency*, p. 113, says "An ideal working force is one having all places filled by men fitted by nature to their tasks. . . . " Henry P. Weld, *Psychology as a Science*, p. 255, says "This individual (the worker) constitutes as it were the raw material of the discipline; it is he that is to be trained, educated, controlled, and made efficient. It is he that must be tested, measured, and compared."

In the era of Welfare Capitalism many labor relations experts advocated the "how-to-win-friends" or the backslapping and first-name-salutation approach. This was the one-big-happy-family concept of industrial relations sometimes referred to as benevolent paternalism. Scientific managers attempted to differentiate between scientific welfare plans and its cruder manifestations,[15] but the differences were in words rather than in deeds. Maximum cooperation was to be achieved by complete domination of a worker's life so as to shut out competing ideas, loyalites, and sources of assistance.[16] Welfare Capitalism sought cooperation through industrial feudalism. The corporate barons would provide company housing, social, recreational, and education activities, economic security in the form of pensions and profit sharing, and a pleasant, safe place to work.[17] The corresponding duties of the worker were to be loyal, obedient, unquestioning, grateful, ox-like, and cooperative.

Once again the "scientists" were disappointed, for the workers failed to respond to corporate generosity. Actually, the response was generally negative.[18] Instead of gratitude, workers resented the attitude of charity, social uplift, and benevolent despotism. As men nurtured in democracy they demanded these benefits as a right, rather than as a gratuity. Today the techniques of Welfare Capitalism are incorporated in state industrial codes, the Social Security Act, and collective bargaining agreements, which places cooperation on an altogether different basis.

A significant revelation in the welfare experiments was the fact that those schemes which worked best were those permitting worker participation in planning and policy. This is all right when applied to a dance or ball game, but when considered as a key to cooperation in shop problems, it causes a hasty retreat on the part of many employers. The price of cooperation becomes too high. Nevertheless, experience in labor-management relations made it apparent that some mechanism for worker participation in shop problems was a necessary adjunct to cooperation. Both the engineers and psychologists found this to be true.[19] Another device hit upon to secure cooperation through participation was employee representation plans—better known as company unions. Labor relations experts labeled these as "scientific" as opposed to the unscientific free labor movement.[20] It would be laboring the point to review the weaknesses of company unions, but it must be recalled that they were hailed as the solution to industrial peace. They were free from outside agitators and dedicated to cooperation rather than conflict.[21] Moreover, they prevented genuine worker participation in shop

[15] See Lillian M. Gilbreth, *The Psychology of Management*, p. 318, and Henry P. Kendall, *Types of Management*, p. 17.

[16] Richard A. Lester, *Economics of Labor*, p. 663.

[17] See John Caulder, *Capital's Duty to the Wage Earner*.

[18] Louis A. Boettinger, *Employe Welfare Work*, p. 223.

[19] See Harry W. Hepner, *Human Relations in Changing Industry;* William J. Lauck, *Political and Industrial Democracy;* and Samuel A. Lewison, *New Leadership in Industry*.

[20] Morris S. Viteles, *Industrial Psychology*, p. 622.

[21] See A. M. Simmons, *Personnel Relations in Industry*, p. 263, and Walter D. Scott, Robert C. Clothier, Stanley B. Mathewson, and William R. Spriegel, *Personnel Management*, p. 390.

problems. Yet company unions often became frankenstein unions, turning on the scientists who created them.[22] The confidence of nineteenth century scientific thinking is hard to shake, however, and now the "scientists" are setting about to bring the monsters to heel.

The managerial sociologists are another group who have recently given their attention to labor-management cooperation. Discovery of the social group[23] in industry is one of their major contributions—something union organizers and established labor specialists have long known without clothing the fact in the obscure jargon of sociology.[24] Assuming a rational economic system, the management sociologists conclude that the natural desire to cooperate is thwarted by misunderstanding arising from the complexity of modern industry. This is called a problem in "communication." By reopening lines of communication in large scale industry the lack of understanding will disappear, and cooperation will follow. To open the flood gates for an upward flow of information from workers to management, sociologists experiment with polling devices and depth interviews. Thus armed with the results of mass psychoanalysis, sociologists hope to formulate policy that will lead to cooperation. Note that these devices do not require management to meet the demands of workers head-on as in communication via collective bargaining. There are no watchers at the poll. Management draws its own inferences from statistical results and institutes corrective policy to bring conditions desired by management. To more effectively communicate management's views to the workers, for a downward flow of information, sociologists are improving the old techniques of company newspapers, plant bulletin boards, and captive audiences. Here the object is not to psychoanalyze management, but to set up a ministry of propaganda to induce workers to become more cooperative with management.

Aside from the objectionable way in which these techniques are used, their scientific validity is open to question.[25] Equally serious is the assumption that misunderstanding is a major cause of conflict. Too much understanding of another's motives, ability to pay, and ambitions may cause even less cooperation.

Similar to the psychologists' discovery of individual maladjustments arising

[22] Richard A. Lester, *op. cit.*, p. 670.

[23] Elton Mayo, *Human Problems of an Industrial Civilization*, p. 116.

[24] Finding group behavior in industry to be "irrational," the sociologists also attack the assumptions of the classical economists which failed to cause self-interest to lead to cooperation via the price mechanism. Due to a breakdown in communications between the social sciences, the sociologists apparently are unaware that most economists have known this for some time. Moreover, these sociologists have judged the worker group irrational by their own standards rather than on any scientific basis. The entire economic system is irrational from the point of view of the classical economist, the engineer, and the socialist. Within our irrational economy, restriction of output by workers is as rational as tariffs, farm parity payments, and the silver subsidy. This syndicalist quality of our economic structure is missed by many students of cooperation.

[25] Dr. Gallup has raised suspicions in many minds regarding public opinion polls. As to depth interviews, Professor Boulding has remarked that once a worker is interviewed, he is no longer the same worker. Some unintentional non-directive guidance may result from thought-provoking questionnaires.

from the complexities of industrial society, the sociologists find the social group seeks stability of social relationships and resists technological change. Accepting the values of the better classes, the sociologists damn this as reactionary and opposed to progress.[26] Accordingly, the sociologists have set about to overcome this irrational desire for security by scientific control of the worker-group. "Social skills" are to be developed, by which the group may be manipulated.[27] For the same reasons that the "rat psychologists" failed to control the individual worker, the "cow sociologists" will fail to control contented herds of workers. Accordingly, it may be concluded that the "scientists" have developed useful techniques for aiding in cooperation, but have failed in their principal objective of dominating workers' thoughts, ambitions, and behavior.

COOPERATION WITHIN INSTITUTIONAL FRAMEWORKS

In contrast with the attempts to *control* workers is the approach of the institutionalists. Institutionalists may be so labeled because they study institutional rather than scientific factors in the search for cooperation. Historical development, institutional configurations, and socio-economic structure is emphasized. For instance, the force behind the idea of democracy is given its proper place in the problem of cooperation. To peasants, whose status is frozen and who accept their lot unquestioningly, the problem of securing cooperation is simplified. Our cultural heritage carries a strong drive for greater democracy, politically, socially, economically, and in industrial relations. Intangible and immeasurable as the force of this democratic ideal may be, it is no less real. Workers who embrace the Bill of Rights and Declaration of Independence wish to bring these ideals into the shops where they spend the greater part of their lives. This changes the terms upon which labor is willing to cooperate.[28]

Institutionalists also recognize the dynamic nature of society, taking into account underlying structural change. They do not assume that cooperation must be achieved within the static framework of existing society. Instead of viewing unions as an evil, first to be destroyed and, failing, to be out-maneuvered, institutionalists consider unions the inevitable result of industrial civilization. The institution of labor unions is as much a product of industrial society as modern corporations, the stock exchange, and our monetary system, and should be studied as such.[29] For this reason, institutionalists have been called pro-unions. In contrast to those who seek cooperation by the elimination of unions, this is correct, but it does not mean that institutionalists put all unions and all union tactics above criticism. Cooperation within this broader framework

[26] Elton Mayo, *op. cit.*, p. 181.

[27] *Ibid.* p. 166. Professor John W. McConnel, Cornell University, speaking at the May 1950 meeting of the Industrial Relations Research Association, Chicago, Ill., gave the objective of labor relations research as learning how to control groups of workers.

[28] See Clinton S. Golden and Harold J. Ruttenberg, *The Dynamics of Industrial Democracy*.

[29] For a development of the above view and for criticisms of the "Human Relations" approach see John Dunlop's "Framework for the Analysis of Industrial Relations," *Industrial and Labor Relations Review*, Apr. 1950, p. 383.

becomes a problem of harmonizing interests between institutional groupings, and further complicated by the fact that the structure of our political economy is not static.

This differs from the "scientific" approach which considers the industrial scene as a laboratory experiment. The test-tube approach assumes the experimentor to be the independent variable whose actions govern the dependent variable whether it be elections, molecules, rats, or workers. There is no reason, however, that workers cannot experiment with their experimentors. Indeed, unions hire their own experts to test out the management reactions to union tactics. Institutionalists realize that employee-employer relations is one of *interaction* instead of action and reaction.[30]

Elton Mayo commented that everywhere the problem of cooperation is the same, whether in Nazi Germany, in Communist Russia, or in Capitalist America; regardless of the economic system, cooperation is essentially a problem for the social scientist.[31] Institutionalists dispute this. The right to organize, to strike, and to bargain collectively, as well as the employer's loss of rights to blacklist, to discriminate, to secure injunctions, and to import strike breakers all has a bearing on the terms of cooperation. Every civilization has different arrangements for group cooperation, and the brute force behind slavery may be more effective than psychological trickery or sociological skills in maximizing production. Institutionalists state the problem of cooperation in our society as one of obtaining the *consent* of the group, rather than controlling the group.[32] This implies that the social group has an element of free will. Further, it carries the inference that cooperation is voluntary. This puts the issue in a different light. The necessity of labor and management to cooperate for their mutual well-being remains, but in this context it is revealed that either party may withdraw, temporarily at least, from cooperative efforts. Short of revolution, such a withdrawal can never be permanent, but the threat of withdrawal forces both sides to bargain over the terms of cooperation. Within such a framework, cooperation means mutual consultation over terms of production. Used in such a way, cooperation is something different from the "cooperation" in the parent-child relationship, the teacher-student relationship, or the officer-soldier relationship. Children, students, and G. I.'s are not free, cannot give consent, and cannot withdraw from the relationship. To abuse the term, "they can be *made* to cooperate." Confusion between the master-servant relationship and the employee-employer relationship has, no doubt, caused the misunderstanding between these two different meanings.

From reading the literature one cannot help but feel that the "scientists" hold cooperation to be a "good," while conflict, per se, is "bad." Institutionalists look upon conflict and cooperation as alternative methods of solving problems,

[30] Edward C. Lindeman, "Industrial Technique and Social Ethics," *Survey*, Aug. 1923, p. 495.

[31] Elton Mayo, *op. cit.*, p. 182.

[32] Robert S. Valentine, "The Progressive Relation Between Efficiency and Consent," in E. E. Hunt (ed.), *Scientific Management Since Taylor*, p. 203.

and either may be "good" or "bad" depending upon the circumstances.[33] Conflict is described by John R. Commons as an education process in which democratic institutions learn cooperation.[34] In a dictatorship there is no conflict and no deviationists; there is unity and everyone "cooperates." Here the institutionalists make an assumption which has not been scientifically established. It is their belief that in the long run the democratic process is more efficient that the totalitarian one.[35]

The democratic manifesto of David Lillienthal might well be applied to illustrate this point. Lillienthal concedes that free discussion causes delay while blind obedience gains quick decisions and violence can smother dissent. Nevertheless, he argues that democracy gains its strength by taking advantage of man's nature; man's desire to participate, to create, to express opinion. Conversely, the weakness of totalitarianism, national or industrial, is the lack of harmony with man's nature. (If this is a fact, most civilizations of the world throughout history have been "unnatural.") Returning to ethical values, Lillienthal scores the dignity and importance of human beings as the mainspring of democracy. This ethic, he claims, must be harmonized with mass-production and specialization on one hand, and on the other hand it may be the ideal which can harmonize the destiny of our culture.[36] Institutionalists introduce the implications of the Judo-Christian ethic into the analysis of cooperation for our particular society.

While the scientists have sought cooperation through science, institutionalists consider the problem as one involving politics. The scientific mind dislikes the unscientific method of politics where the shortest distance between two points is never a straight line. Industrial engineers want to keep "politics" (and collective bargaining) out of their "logical" methods of wage administration. Psychologists counsel avoidance of "compromise" in industrial relations and advocate "integration" instead.[37] Science also seeks final solutions, while politics deals in the pragmatic and the expedient. The institutionalists, however, realize that politics has its place in industrial society just as it does nationally. The procedures of collective bargaining, the grievance machinery, and arbitration are more political than scientific.[38] This is sound procedure because there are, in fact, no scientific answers to the issues involved. One may as well argue for the abolition of our national democracy in favor of the dictatorship of the technocrats. Where divergent views are permitted to exist, however, cooperation is possible only through compromise. Institutionalists, therefore, don't attempt to give final answers to industrial relations issues, but seek procedures through which the parties can work out their own solutions.

Both the "scientists" and the institutionalists agree that worker participation

[33] Ordway Tead, *Human Nature and Management*, p. 132.

[34] John R. Commons, *Industrial Goodwill*, p. 88.

[35] See Ordway Tead, *op. cit.;* John R. Commons, *ibid;* and Morris L. Cook and Philip Murray, *Organized Labor and Production*.

[36] David Lillienthal, *This I Do Believe*, pp. 27–47.

[37] Morris S. Viteles, *op. cit.*, p. 623.

[38] See the statement of Louis Brandeis in the foreword to *Primer of Scientific Management* by Frank B. Gilbreth.

in the decisions of management is an important factor in gaining cooperation.[39] The institutionalists differ from the "scientists" in their analysis of how to bring about participation. The "scientists," generally, are in the employ of management, accept management values, and, as a result, dabble in creating the illusion of genuine participation while continuing jealously to guard the absolute authority of management. Company unionism is a notable example of this. The recent vogue of "Human Relations" in industry also preaches pious words of participation but upon analysis is revealed to be insincere old ideas in new clothes.[40] Without the aid of large research grants and research teams, John A. Fitch long ago observed that participation was a key to cooperation.[41] He explored the areas in which labor and management had mutual interests, where cooperation came easily, and areas where differences of opinion must be reconciled through collective bargaining. The institutionalists are faced with the problem of finding workable techniques for increasing union participation in management affairs.

Extremists for cooperation through participation of a legitimate union advocate union-management cooperation schemes. The failure of formal union-management experiments, however, illustrates the issues involved in cooperation.[42] The fear of unemployment, disagreement on sharing the fruits of cooperation, jealousy over property privileges, and the union's failure to represent the interests of the workers are the basic causes for the break-down of formal union-management cooperation. A paradox is revealed in which the function of management is efficiency and the function of the union is to protect workers from too much efficiency. Neither can assume the other's function.[43] Until these basic causes for lack of cooperation are resolved, cooperation must continue on a "muddling through" basis.

Although formal union-management cooperation has failed, unions have nevertheless advanced steadily, widening scope of collective bargaining to include greater areas of management policies involving job security. Management, generally, resents the intrusion, asks where it is going to end, and whether cooperation is possible only by compromising all rights of management.[44] These

[39] The post-war rash of Industrial Relations Departments in universities was justified in legislatures and to business interests on the grounds that techniques and education could be pursued which would cause labor to be more cooperative with management. Happily, these schools seem to have passed this stage of development but now appear confused as to how to study the problem of industrial cooperation.

[40] For a good example of this see the Prentice-Hall pamphlet, *Human Relations in Modern Business*.

[41] John A. Fitch, *The Causes of Industrial Unrest*, believed that the inferior status of the worker in the production process was a cause of unrest. Unlike the "scientists" who have recently become concerned with status, Fitch concluded that self-expression, status and participation must be gained through collective bargaining.

[42] Sumner H. Slichter, *Union Policies and Industrial Management*, pp. 393-579.

[43] Failure of the self-governing workshops in the middle of the nineteenth century is illustrative of this. See Selig Perlman, *History of Trade Unionism in the United States*, pp. 30, 52, 62, 71, 127.

[44] Lee H. Hill and Charles R. Hook, Jr., *Management at the Bargaining Table*, pp. 3-10, 56-60.

are the issues in the defense of "management prerogatives." Regarding this lament of businessmen, there is a distinction to be made between the "scientist" and the institutionalist on the subject of prerogatives. The scientists consider cooperation to be based upon a division of labor in which the planning function is given to specialists in management and the specialty of carrying out orders is alloted to workers.[45] Institutionalists argue that the concept of functional management means that workers must participate in management to the extent that workers have an interest in management's decisions.[46] This theory opens up new areas of cooperation, but at the same time creates new problems in cooperation.

A question is bound to be asked, for instance, how workers, through their unions, can cooperate in management and continue to be irresponsible; to take the critical, the antagonistic, the negative attitude toward production problems. This was the paradox facing the British Labor Government as it sought to play the dual role of protecting the particular interest of the worker and improving the general welfare through greater efficiency. The answer is that cooperation, in the sense of voluntary cooperation of free men, is only possible to the extent that there is responsibility. Hence, children cannot truly cooperate in family affairs unless and until the children have learned responsibility. Historically the labor movement may be viewed as a growing child that both challenges the authority of the parent and at the same time learns the responsibilities of citizenship. The truth of neo-classical analysis is clear in Britain today, for if workers dispute relative shares, total production will fall. The problem of the Labor Party is to develop institutional procedures to replace an outmoded price system. In large part, this is a matter of achieving maturity on the part of organized groups.

Although science can help in the analysis of cooperation, its shortcomings must be recognized. Social scientists have given intensive study to the causes of industrial cooperation in one plant only to find that seemingly identical conditions were a source of unrest in another plant. Apparently there is an elusive element in cooperation that defies discovery. Perhaps John R. Commons was correct when he stated that industrial cooperation was so delicate that attempts to analyze it will only destroy it.[47] Our techniques are so clumsy that we succeed only in mangling the thing we seek to dissect. The physical scientists are now encountering the same difficulty in studying the election. The mere presence of

[45] Technicians do not wish to debate their expert decisions with the rabble. Hence, they set forth the concept of functional management in which authority stems from function rather than rank. Functional management is usually interpreted as giving more authority to technical specialists while the worker is subjected to the authority of an increasing number of experts.

[46] Mary P. Follet, *Creative Experience*, argued that there is no sharp distinction between the planners and the doers. Everyone is a worker. Everyone has a function in management. "Management" is the cooperating of interested parties.

[47] Cooperation may be compared to love. Love is difficult to define, impossible to measure, and yet we are reasonably certain that it exists. Those who allege to be in love find it difficult to explain how they know it, and cannot say how much in love they are. Poets rather than scientists seem better equipped to analyze the phenomena.

apparatus necessary to study the election causes the election to behave differently than if the devices were absent.[48] Undoubtedly, the presence of strangers in a factory to interview, to poll, and to experiment introduces a new element into the study which renders the experiment invalid.

Similarly a painting by a master, or great work of music defies scientific analysis. Lengthy essays may expound the technical quality of masterworks, but words and measurement remain inadequate for describing art. In the same way, cooperation, whether it be international, marital, or industrial, seems to evade analysis. It also is a form of art. Because much of industrial relations is an art, one hears such unscientific language as "gaining insights," having a "feeling" for the subject, the necessity "to keep one's ear to the ground" and to "play by ear."

To summarize, the institutionalists study cooperation in an historical context, and in so doing raise questions of our democratic heritage, changing social, political, and economic structure, and ethics as they pertain to cooperation in our particular society. Institutionalists also realize that organized pressure groups, with political freedom and freed from the laws of the market, can destroy each other and society as well if cooperation breaks down. Accordingly, they promote means by which existing institutions can work out their own conflicts, advocate maturity and responsibility, but make no guarantees that enlightened self-interest will triumph over narrow selfishness.

[48] John W. Sullivan, *Limitations of Science*, pp. 69–72.

SHARE LEASES AND THE INTER-PRODUCT ALLOCATION OF AGRICULTURAL RESOURCES*

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Nearly one-half the firms in the agricultural industry obtain use of resources through leasing contracts. Although numerous variations exist, there are three general types of leases: (1) crop-share leases where the tenant pays in kind (a share of the crops) for the services of land and building resources, (2) cash leases where land and building services are obtained under a cash (fixed or lump sum) payment to the landlord, and (3) livestock-share leases where (a) the tenant furnishes the services of labor and machinery, (b) the landlord furnishes the service of land and buildings, and (c) both furnish an equal share of other resource services. Agriculture is unique in the existence of an extensive market where the price for resource services is paid in product rather than in cash. The amount of land and number of farms rented under crop-share leases, or a price in kind, by far exceeds that rented for cash or a price in money. Obviously, because of the quantity of resource services hired through the lease market, imperfections growing out of leasing systems can have an important impact on agricultural efficiency and total welfare.

Little recent effort in economic theory has been devoted to this unique "market in kind." It did, however, attract the attention of Smith, Ricardo, McCulloch, Marshall and other early economists. The possible different effects of the English cash rental system and the European metayage or share systems led Marshall to say that the division between the landlord's and the tenant's share to be a most important problem for the science of economics.[1] He applied theory particularly to the effect of division between resource service and product shares on farming intensity. His principles also have many interesting notes on the impact of the customs which permeate farm rental markets. Ricardo was, of course, particularly interested in leasing systems as they related to determination of rent. Smith was more nearly concerned with describing the systems and in their "effect on the wealth of nations."

Over the last several decades, agricultural leasing systems have been studied almost entirely in a quantitative manner. These quantitative studies have been largely of an historic or descriptive rather than of an analytical nature. Indeed, it is likely that imperfections which grow out of custom and which permeate the leasing market are actually extended through the major efforts of agricultural economists in their attempt to study or find out "what the leasing customs are" and then pass these along as "standards" to new tenants and landlords.[2]

* Journal paper No. J-1865 of the Iowa Agricultural Experiment Station, project 1135.

[1] Alfred Marshall, *Principles of Economics* (8th ed.), Chapter X and especially pp. 635, 646.

[2] A sizeable amount of manpower is employed in land grant institutions to carry on re-

An existing void in the analysis of tenure systems is that dealing with the basic principle or theory of the various leasing contracts. Refinement and application of productivity and firm theory to farm leasing systems can be useful in (1) providing major hypotheses for empirical studies (and hence serve as an aid in guiding research away from traditional historical or descriptive aspects) and (2) providing basic logic for the many problems which cannot be solved in an empirical sense. Then, too, application of basic principle to agricultural leasing systems is of general interest since the unique "market in product" does not exist to an important extent in other industries, and little of the literature of economics is devoted to this particular problem.

ANALYSIS IN PRODUCTION ECONOMICS

This study represents an attempt further to relate fundamental theory to leasing systems. Our earlier study dealt especially with intensity and scale of the firm.[3] The current effort centers on the intra-farm allocation of resources. We are thus concerned only with production economics or resource efficiency (and farm management) phases of the leasing problems. We make no attempt to analyze purely land economics (division of property rights, legal institutions or historic evolution) aspects of farm leases. Neither do we touch upon those problems of leasing which relate to income distribution ("fair rents," etc.). Specifically, the analysis deals with the allocation of given resources between alternative enterprises or products on a farm (a multiple-product firm). To what extent are the interests of the tenant and landlord in harmony or conflict in the use of resources between competing alternatives under different leasing systems? To what extent and under which conditions do share or cash systems result in an inefficient use of resources (not only from the standpoint of the farm but also from the standpoint of consumer choice or total welfare)? In what manner (apart from a firm owning title to all classes of resources) can leasing contracts be devised which eliminate possible imperfections? Our analysis is in the form of the theory of leasing systems. Only to the extent of providing a brief background

search and farmer education on leasing systems. Perhaps in the country upwards of 150 farm management and tenure specialists in agricultural economics departments devote all or part of their time to leasing work. The main effort to date has been the use of surveys to find the manner in which leasing systems are arranged and the shares of factors and products or the cash paid for specific resource services. In education the existing arrangements are retailed to those interested in leasing arrangements. The writer is perhaps guilty in extending these customs through previous undergraduate courses which he taught. However, it appears that the important need is to "break out" in a new direction (since existing customs have now been widely described in several hundred experiment station bulletins and pamphlets) and explain the phenomena of leasing systems as they relate to resource efficiency and income distribution. Of course, it is also true that there is need for continued scrutiny in the vein of traditional institutional or land tenure investigation dealing with the historic evolution of various systems and the legal aspects of the different leasing forms.

[3] See Earl O. Heady, "Economics of Farm Leasing Systems," *Journal of Farm Economics*, Aug. 1947, pp. 659–678, and D. Gale Johnson, "Efficiency of Share Leasing Contracts," *Journal of Political Economy*, Feb. 1950, pp. 401–427, for a discussion of leases as related to intensity and scale for a single firm.

do we present descriptive information on leases. Too, our analysis relates to empiricism only in providing models or hypotheses for quantitative surveys.

ANALYTICAL BACKGROUND

Descriptive background for our analytical problem are not provided in this study. However, it is known that in the various agricultural areas, decisions in respect to use of resources are made either by tenants alone, by landlords alone or by tenants and landlords in combination. The single-party decision predominates in most regions. Thus, the following analysis is in terms of the conflicts between landlord and tenant as representative of the decision-making firm.

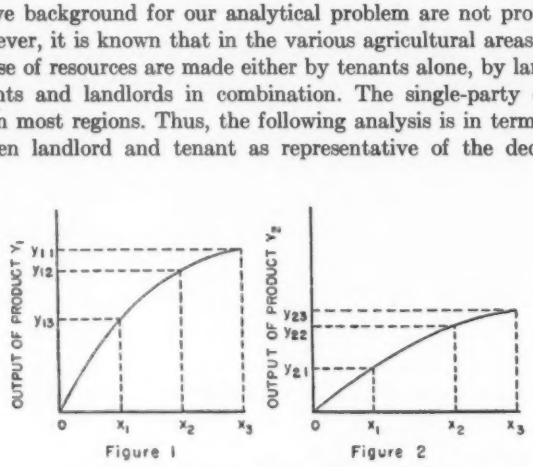

Figure 1 Figure 2

Input of Resource X (Input of Resource Z Fixed at the Quantity z_k)

In order to simplify and relate basic economic principle and solution to the questions posed, we first suppose a farm of a given number of acres of land upon which two independent and competitive products, Y_1 and Y_2, can be produced through the addition of capital and labor. The production functions (relationships between input of resources and output of product) for each product (enterprise) are of the nature illustrated in figures 1 and 2. The maximum output of Y_1 from the given acreage is y_{11} and is forthcoming with an application of ox_3 input of capital and labor. Similarly, the maximum physical output of Y_2 possible from the given quantity of land is y_{23} forthcoming with an application of ox_3 of capital and labor. (The magnitude of the production coefficient—rate at which resources are transformed into product—is only four-fifths as great for Y_2 as for Y_1.) The allocative possibilities (possible choices of the two crops from the given stock of land and ox_3 quantity of labor) are given in figure 3. Curves $y_{22}y_{13}$, $y_{12}y_{22}$ and $y_{11}y_{21}$ are transformation functions or iso-resource (production possibility) curves. They illustrate the possible combinations of Y_1 and Y_2 which can be produced from the fixed aggregation of resources. Curve $y_{13}y_{23}$ shows the production possibilities when the stock of capital and labor is constant at ox_3 and the quantity of land is fixed at z_k; for example, if the entire stock of land, capital and labor is allocated to Y_1, the output is oy_{13} (and none of Y_2). Use of all resources in production of Y_2 would result in an output of oy_{23} of this product and none of Y_1. Between these extremes any possible com-

bination of Y_1 and Y_2 consistent with $y_{12}y_{22}$ can be produced by using resources for production of both commodities. If the available quantity of capital and labor to be applied to the given acreage of land is ox_2 (figure 1 or 2), the production possibility curve becomes $y_{12}y_{22}$ (figure 3). A stock of capital and labor equal to ox_1 (figure 1 or 2) to be applied to the given acreage gives the iso-resource curve $y_{11}y_{21}$ (figure 3). Here the production possibilities are (1) an output of y_{11} of Y_1 and none of Y_2 if all resources are devoted to the farmer, (2) a zero output of Y_1 and y_{21} output of Y if all resources are devoted to the latter, (3) an output y_{1a} of Y_1 and y_{2a} of Y_2 if one-half of the given stock of resources is allocated each enterprise, or (4) any other combination of Y_1 and Y_2 consistent with the iso-resource curve $y_{11}y_{21}$.

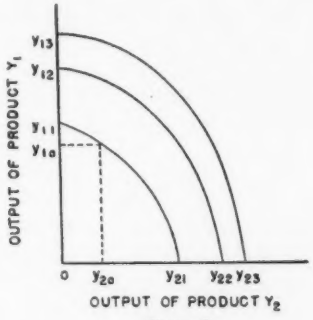

Figure 3

OWNERSHIP OF RESOURCES AND TENANT SELECTION

Under common crop-share or cash leases, the landlord owns the land and buildings and perhaps owns and furnishes a small portion of the capital resources in the form of seed and fertilizer. The tenant owns the labor and capital aside from that specified above. In order to simplify the analysis we will henceforth denote landlord-furnished resource services with the term "land" or factor Z and tenant-furnished resources services as "labor," or factor X. We further suppose that the two independent products, Y_1 and Y_2, are alone the function of factors X and Z. Although the outcome would be similar if any number of resource categories were considered, these two resources will be used in analysis of the problems posed. We suppose a firm (farm) where the landlord owns and furnishes the services of factor Z and the tenant furnishes all of the services of factor X. Factor Z is fixed in the quantity z_k.

The first problem in leasing is selection of a tenant. Either (a) the landlord "must find a tenant" or (b) the tenant "must find a farm." Under a cash lease and in the absence of long-run effects of the tenant's activities on productivity of the landlord resources, the landlord can be indifferent about the quantity of resources owned by the tenant. He may, for example, select any one of three different tenants with varying amounts of labor, such as ox_1, ox_2 and ox_3 in figure

1 or 2, without affecting returns from his own resources as long as conditions of the market are competitive in the sense that he is able to exact the same cash rent from the several tenants. The situation is entirely different under a share-lease, however. Here the landlord receives a portion (one-half, two-fifths, one-third, etc.) of the output from each increment of resources furnished by the tenant. Accordingly, the landlord's returns will be maximized should he be able to obtain a tenant with a stock of labor great enough to maximize the physical product on the fixed land area. Should it be possible, the landlord would prefer, in terms of maximizing his own returns, to obtain a tenant who can furnish ox_3 of labor (figure 1 or 2) and employ all of it on the given unit of land. However, since this is generally impossible since the tenant would have to extend labor input to a point where marginal cost exceeds marginal returns, the landlord is faced with selecting the tenant with the greatest resources. Resources include the tenant's managerial and technical ability. Suppose in our case that a tenant with ox_2 resources (figure 1 or 2) can be obtained. Problem one has been solved. The central question now remains, however. How will the ox_2 resources be allocated between products Y_1 and Y_2 were either the landlord or tenant to maximize returns?

ALLOCATION OF RESOURCES

Under owner-operation of all resources (e.g., a farm operator owning the z_k quantity of factor Z and the ox_2 quantity of factor X), returns to the farm firm and hence to the operator can be maximized by allocating resources to product Y_1 and Y_2 in a manner to equate (inversely) (1) the marginal rate of substitution of the two crops and (2) the price ratio of the two crops.[4] Profit maximization is illustrated geometrically in figure 4 by tangency of the iso-resource or "total" possibility curve $y_{1T}y_{2T}$ and the iso-revenue curve I_1R_1. Maximum profits are forthcoming when the given resources (ox_2 of X and z_k of Z) are allocated between the enterprises in a manner to give the outputs (a) oc of Y_1 and (b) og of Y_2. Given the absence of market imperfections for both commodities and factors (and hence assuming that price ratios accurately reflect the relative choice or values of consumers), the combination of Y_1 and Y_2 is most efficient from the standpoint of the individual firm (profit maximization) and society (a pattern of resource allocation consistent with consumer choice).[5]

CASH LEASE

A tenant who owns ox_2 of factor X and who rents the z_k quantity of land resources for cash (and hence can make decisions on the basis of the total trans-

[4] Given this condition $\frac{dY_1}{dY_2} = \frac{P_{y2}}{P_{y1}}$ the marginal productivity of resources allocated to either crop is equal.

[5] We recognize that (1) markets (a) are imperfect and (b) do not always accurately reflect consumers' values, and (2) distribution of income (the allocation of Y_1 and Y_2 between different consumers) is a variable along with production in determining the conditions under which welfare can be maximized. However, there are problems apart from the phenomenon being analyzed here and space limitations do not allow their treatment.

formation function $y_{1T}y_{2T}$ in figure 4) also can maximize revenue by producing oc of Y_1 and og of Y_2. This use of resources need not conflict with the interests of the landlord.[6] Since the cash price paid by the tenant for use of the land is the same regardless of the manner in which resources are allocated between competing enterprises, the return to the landlord is the same in any case. The allocation of resources which will maximize revenue to the tenant under a cash lease is consistent with (1) the choice of the consumer, (2) the allocation of resources on an owner-operated farm, and (3) the interests of the landlord.

SHARE CONTRACTS

The outcome may differ greatly, however, under a share contract depending on the manner in which rentals are determined. Long standing customs have grown up in the rental market with different shares paid by the tenant to the landlord for different crops. Customary share rents over a large area of the Cornbelt include one-half of the corn and soybeans and two-fifths of the small grains (with cash rent paid for forage crops or a share given on hay). Shares vary over parts of the Great Plains between two-fifths and one-third or one-third and one-fourth for corn and small grains respectively. Even within homogeneous soils areas of the Cornbelt, some landlords charge one-half while others charge two-fifths of the soybean production. The lower rate is often offset by a higher share on other crops or a greater cash charge for forage crops. Similar variations between crops in share rentals can be found in other regions of the United States. These variations in share rents between crops are historical or of long standing and their basis is hard to determine. A possible hypothesis and the common man-on-the-street observation is that variations between crops are designed to give the tenant somewhat equal returns from resources devoted to different crops. For example, if costs are \$15 per acre for corn and \$10 per acre for flax while gross returns are \$40 and \$25 respectively, the shares of one-half for corn and two-fifths for flax would accomplish this equalization for the tenant.[7] Other hypotheses relative to the manner in which share rents are established between crops include (1) equal returns for the landlord and (2) competitive market prices in a manner which equalize the marginal productivity of resources employed for different products. We seriously doubt that the latter is approximated to any fine degree. Even in spite of wide changes over time between crops in respect to technology, yield and price relationships, share rental rates have changed slowly and often not at all over two or three decades. Differential share rents are the rule rather than the exception in many agricultural areas. Customs, regardless of their original foundation, are evidently of great importance in freezing share rentals in fixed proportions between crops. On the following pages we examine the possible consequences of the outcome for differential share

[6] We have assumed (1) competitive enterprises for the firm and (2) the lack of productivity effects by the tenant's action. These premises are relaxed at a later point.

[7] If the tenant pays one-half the return as rent his own "gross income" for corn is \$20 and the net is \$5 (\$20 minus \$15). If he pays a two-fifth share of the oats, the gross for the tenant is \$15 and the net return is also \$5 (\$15 minus \$10).

rents established either (a) to equalize tenant returns or (b) equalize landlord returns.

EQUAL RETURNS TO AND DECISIONS BY THE TENANT

On many farms the exact acreage of crops to be grown is not specified in the lease, but is a decision to be made by the tenant. How will the allocation of resources be affected or differ from that of the cash-rented or the owner-operator farm under this arrangement? Possible outcomes here again can be illustrated by the simple model in figure 4. We first suppose that differential share rents between Y_1 and Y_2 have been established to give equal (post-share) physical quantities of the two competing products to the tenant. We further assume that "on the average" (e.g., if all resources are devoted to either Y_1 or Y_2) the yield or productivity per unit of resource is 1.2 greater for Y_1 than Y_2.[8] Thus, if the share rent is one-half for Y_1, returns (between crops) to the tenant can be equalized if the share rent for Y_2 is two-fifths of the product.[9] The transformation function or possibility curve which is important to the tenant decisions is now no longer the "total" possibility curve $y_{1T}y_{2T}$ in figure 4. This is, however, the relevant possibility curve for decision-making by the owner-operator (or cash tenant). Instead the "post-share" possibility curve y_1y_{2t} is now relevant in decision-making. It represents the quantity of the total product remaining after share rent has been paid and can be derived by subtracting the landlord's share of Y_1 and Y_2 from each point indicated on the "total" possibility curve $y_{12}y_{22}$. The "post-share" (tenant's decision-making) possibility curve y_1y_{2t} has less slope than the "total" possibility curve, $y_{1T}y_{2T}$ since a smaller share-rent is paid for Y_2 than for Y_1.[10] (The actual or "total"[11] possibility curve facing the tenant is, of course, still $y_{1T}y_{2T}$.) Thus, since the slope of the decision-making possibility curve which faces the share tenant has a smaller slope ($\frac{dy_1}{dy_2}$ is greater)

[8] Similar assumptions to those outlined here will be followed in other situations discussed below. Equal value return is more relevant than equal physical return. In order to simplify our analysis and include value aspects we further assume that the price per unit of the two commodities is the same (the slopes of all revenue curves are of 45 degrees). It is also true that one level of differential shares alone would equate returns between crops only if (a) the transformation function is linear or (b) the transformation function is concave and returns comparisons are made between crops when all of the resources are devoted entirely to Y_1 or entirely to Y_2. We suppose that the transformation function is concave (as is generally the case in agriculture because of the biological and seasonal nature in production) and that the differential in rents is given for a single farm (does not vary with the quantity of either product being produced on the particular farm) is the actual case.

[9] For example, if the yields are 36 and 30 for X_1 and Y_2 respectively, a one-half share rent will leave the tenant 18 units of Y_1 and a two-fifths share rent will leave him 18 units of Y_2.

[10] Several equalities are apparent in figure 4. Given the specified quantitative relationships it is true that we have the following identities: $oy_{2t} = oy_{2t} + y_{2t}y_{2t}$ and $oy_{1T} = oy_1 + y_1y_{1T}$. Too, if curve y_1y_{2t} is taken as the share of the total product to the landlord then $y_{1T}\ y_{2T} = y_1y_{2t} + y_1y_{2t}$.

[11] This is true since the tenant's share (oc) of Y_1 is only one-half the total product while his share (oe) of Y_2 is only three-fifths of the total product.

than the one which faces the cash tenant or owner operator, the former will allocate resources differently between Y_1 and Y_2 than either of the latter. Given the same price ratio as indicated previously (an iso-revenue curve with a slope level for the cash tenant equal to that of I_1R_1), maximum revenue to the share tenant is now denoted by tangency of I_2R_2 and y_1y_{2T} (specifying "post-share" outputs of oa of Y_1 and oe of Y_2 for the tenant). Profit maximization to the tenant is possible only when resources are allocated in the manner suggested by point A on the "total" possibility curve $y_{1T}y_{.T}$. This particular point indicates a greater quantity of Y_2 and a smaller quantity of Y_1 than would be produced for equilibrium of a cash-rented or owner-operated farm. Under the share lease the total outputs (possibility curve $y_{1T}y_{2T}$) are equal to 1.67 oe of Y_2 and 2.0 oa of Y_1 (as compared to og of Y_2 and oe of Y_1 under cash or owner operation).[11]

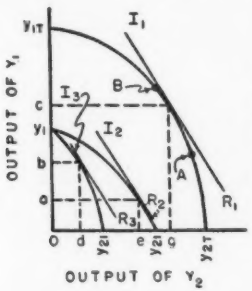

Figure 4

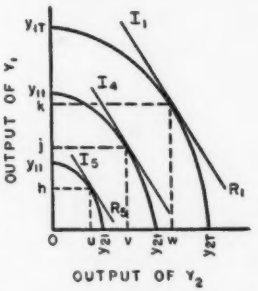

Figure 5

Not only does the combination of products differ from that which would be produced under cash or owner operation, but the pattern of resources allocation does not equate the marginal value productivity of resources between products. This is obvious since at the point A, the "total" possibility curve ($y_{1T}y_{2T}$) and the iso-revenue curve (I_1R_1) are not tangent. (I_2R_2 and y_1y_{2t} are tangent indicating equal value productivities for the tenant's share of the product but not for the total product.) Neither is the resulting allocation of resources consistent with consumer choice (if the slope of the iso-revenue curves is taken as the relative value which the consumer attaches to the alternative products).

EQUAL PRODUCTS TO THE LANDLORD AND DECISIONS BY THE TENANT

An alternative basis mentioned above for differential share rents between crops is one whereby the landlord receives an equal return for the two products. Using the same initial propositions as above relative to productivity of resources and prices for the two crops, the outcome under this case can be illustrated by the post-share possibility curve indicated as y_1y_{21} in figure 4. This is the share of the total product remaining for the tenant after the landlord has received his share. If a one-half share rent is paid for Y_1, then the landlord must receive three-fifths of the total output of Y_2 if he is to realize equal returns from the two crops (when the "average" yield of Y_1 is 1.2 greater than that of Y_2). Curve y_1y_{21} is not only

the post-share possibility curve facing the tenant but again becomes his decision-making possibility curve.[12] This "post-share" possibility curve y_1y_{21} has a greater slope dY_2/dY_1 is smaller than does the "total" possibility curve $y_{1T}y_{2T}$ since the share rent for Y_2 is now less than the share rent for Y_1. Given the same price relation (an iso-revenue curve with an identical slope) as in the previous cases, profit maximization to the tenant is denoted by tangency of the iso-revenue curve I_3R_3 and the post-share curve y_1y_{21} (shares equal to ob of Y_1 and od of Y_2 to the tenant). This equilibrium is denoted on the total possibility curve at point B. (The combination on the "total" curve is the actual output while the combination on the decision-making or the "post-share" curve represents the tenant's product after payment of share rent). Thus, the actual outputs (indicated by point B) of (1) 2.0 ob of Y_1 and (2) 2.5 od of Y_2, differs from the equilibrium output for a cash tenant or owner operator. Again it is true that the allocation of resources neither equates marginal value productivities in a total sense (I_1R_1 and $y_{1T}y_{2T}$ are not tangent) nor conforms with consumer welfare where prices accurately reflect consumer choice.

EQUAL PRODUCTS AND DECISIONS BY THE LANDLORD

Even though the tenant furnishes all of the capital and labor while the landlord furnishes only the land, the landlord specifies the rotation or cropping system which will be followed on many rented farms. Accordingly, we analyze the case in which differential shares are arranged to equalize products (returns) "on the average" to the landlord when he is delegated the decision-making rights. The case is again illustrated by figure 4 where the landlord's post-share possibility curve now becomes y_1y_{2t} while the tenant's share is indicated by curve y_1y_{21}. Given the price ratio indicated by I_1R_1 (I_2R_2, I_3R_3) his returns will be maximized by (1) shares equal to oe of Y_2 and oa of Y_1 and (2) a total product of 2.0 oa of Y_1 and 1.67 oe of Y_2 (point A on "total" curve $y_{1T}y_{2T}$).

If shares are arranged to return equal products "on the average" to the tenant, the landlord's post-share or decision-making possibility curve now becomes y_1y_{21} (while the share of the total product to the tenant is indicated by y_1y_{2t}). Under this arrangement, landlord returns can be maximized (the landlord's "post-share" possibility curve and the iso-revenue curves are tangent) when (1) the total output is 2.0 ob of Y_1 and 2.5 od of Y_2 and (2) his share is ob of Y_1 and od of Y_2. The resulting total output is again that illustrated by point B.

Neither of the resource patterns (under (a) tenant and (b) landlord equalizations) resulting from returns maximization under landlord decisions is compatible with that (1) which would result under cash leasing, (2) which is necessary to equate marginal value productivities of resources in terms of aggregate output and (3) which will conform with consumer welfare. Furthermore, the

[12] The combination of Y_1 and Y_2 indicated on the total possibilities curve ($y_{1T}y_{2T}$) are the sum of the shares to the tenant and the landlord. Therefore, the following equalities again exist: (1) $oy_{2T} = oy_{21} + y_{21}y_{2T} = oy_{21} + oy_{2t}$ (2) $oy_{1T} = oy_1 + y_1y_{1T}$ and (3) curve $y_{1T}y_{2T}$ = curve y_1y_{21} + curve y_1y_{2t}.

optimum allocation of resources is always in conflict between landlord and tenant if differentials in share rents exist between crops. This is also evident in figure 4. When shares are arranged to equalize (on the average) tenant products, the tenant's share is indicated by curve y_1y_{2t} while the corresponding landlorb share is indicated by curve y_1y_{2l}. While the total output combination at point A will maximize the tenant's post-share return, only the total output comdination at point B will maximize the landlord's return. Exactly the opposite total output combinations are optimum for the tenant and landlord respectively when y_1y_{2l} represents the tenant's share and y_1y_{2t} represents the landlord's share of the total product.[13]

TOTAL RETURNS AND ECONOMIC WELFARE

Another observation of the four cases presented above is this: While each one represents a maximization of returns to the landlord or tenant, depending on where the decision-making power rests and given the decision-making or "post-share" possibility curve relevant in each instant, the total tenant's and the landlord's return is not as great as for either a cash tenant or an owner operator from the same aggregate of resources. This is obviously true since maximum returns from the aggregate of resources is forthcoming only if I_1R_1 and $y_{1T}y_{2T}$ in figure 4 are tangent. Neither point A nor B represents this necessary condition. Accordingly, we have one of those rare cases in welfare economics where all individuals (the tenant, the landlord and the consumer) might be made better off through a reorganization of resources.[14]

[13] The imperfections which may arise in the attempt to establish differential rents to attain different objectives can be easily imagined in the case of linear production functions. Suppose that two products (A and B) can be produced (1) under conditions of constant returns to scale for factor X when factor Z is fixed in the quantity z_k and (2) with the production coefficient for A 2.5 times that of B (2.5 units of A can be produced for each unit of B) and (c) with the price of B 2.0 times greater than that of A (B sells for twice as much per unit as A). Under the situation (an A:B substitution ratio of 2.5:1.0 and A:B price ratio of 1.0:2.0) a cash tenant could maximize profits by specializing in A alone (producing none of B). However, under a share arrangement to equalize the product (per unit of resource) to the tenant, the "post-share" substitution ratio will become 1.0:1.0. Thus under a price ratio of 1.0:2.0, the share tenant would specialize entirely in B (the opposite from the cash tenant). A 1.0:1.0 share ratio to the tenant would leave a 6.5:1.0 share ratio (A:B ratio) for the landlord. Thus he would use all resources for production of A under an A:B price ratio of 1.0:2.0.

While the cash tenant would produce all of B when the A:B price ratio becomes less than 1.0:2.0, the landlord would not produce any of B until the price ratio fell below the 1.0:6.5.

Although share rents are not necessarily arranged to equalize physical shares (to the tenant or landlord), the logic developed in this study applies as long as differential share rents exist between competitive crops regardless of the particular basis.

[14] Movement on the "total" possibility curve from point A or B to that indicated by tangency of $y_{1T}y_{2T}$ and I_1R_1 would allow a greater product to consumers (an output more nearly consistent with consumer choice) and a greater total return to be divided between landlord and tenant.

CONDITIONS OF EFFICIENCY UNDER SHARE CONTRACTS

The leasing imperfections and resource inefficiencies mentioned above are not inherent in share leasing per se but rather grow out of the manner in which differentials are established between crops. Conceptually, share-rent conditions can be established whereby the use of resources will conform with (a) that found on owner-operator or cash-rent farms, (b) an equation of marginal value productivities between competing products, (c) a greater product to be divided between landlord and tenant, and (d) a production pattern consistent with consumer choice. These conditions are attained when shares are identical for all competing crops even though the production coefficients (viz.: yield, cost, resource requirements, etc.) differ between products and is illustrated in figure 5 where the "total" possibility curve is again $y_{1T}y_{2T}$. The decision-making (or "post-share") possibility curve facing the tenant is $y_{1t}y_{2t}$ and represents two-thirds share of both Y_1 and Y_2 while the landlord's post-share (or decision-making) possibility curve is $y_{1l}y_{2l}$ and represents a one-third share of the total products. Since shares are the same for both Y_1 and Y_2, the slope of both "post-share" possibility curves ($y_{1t}y_{2t}$ and $y_{1l}y_{2l}$) is the same as the slope of the "total" possibility curve ($y_{1T}y_{2T}$). Given the previously indicated price ratio (suggested by the slope of I_1R_1), the allocation of resources which will maximize returns to a share tenant is identical with the pattern of resource use which will (1) maximize returns to (a) the landlord, (b) a cash tenant and (c) an owner operator, (2) maximize consumer utility and (3) therefore equate marginal value productivities for the aggregate product. Since tangency of (1) $y_{1l}y_{2l}$ and I_5R_5 and (2) $y_{1t}y_{2t}$ and I_4R_4, denote the same total outputs (ok of Y_1 and ow of Y_2) as tangency of I_1R_1 and $y_{1T}y_{2T}$, these consistent conditions can be attained regardless of whether decision rests with the landlord or crop-share tenant.[15]

Thus, while it is true that the share lease may result in an allocation of resources inconsistent with the most efficient use of resources, this is not a necessary condition. Aside from certain limitations (as in managerial ability, capital, etc.) share leasing arrangements can encourage efficiency in the manner of cash rent or owner operation. This is possible, of course, not when differential share rents exist between crops, but when equal share rents are established between crops (in a manner consistent with the productivity of total resources furnished separately by the landlord and tenant).[16]

BASIC HYPOTHESES

The foregoing analysis provides hypotheses and fundamental logic upon which important empirical studies and leasing improvements might be based. Since leasing arrangements are surrounded by a maze of custom and special

[15] The Y_1/Y_2 ratios of (a) ok/ov for the landlord, (b) oj/or for the tenant and (c) ok/ow for the total are equal and define the optimum post-share product for both the landlord and share tenant as well as the cash tenant.

[16] Certain other problems in share leasing are not so easily resolved. These include division of variable costs (intensity), scale of operation, etc. For discussion of these points, see Heady (Economics of Leases) *Journal of Farm Economics*, Aug. 1947.

details, it is difficult to estimate the extent and nature by which leasing arrangements such as those mentioned result in inefficient resource use. Farm economists have long known that operations on rented farms do not compare with those on owner-operated farms. However, since major effort has been placed on "describing" existing leasing systems and "retailing the existing customs" as recommended pattern, imperfections not only tend to be perpetuated, but the bases for imperfections (except for those very obvious ones such as length of lease) tend to go undetected. Given the complex and actual situation wherein (a) share rents vary between competing crops even for the same farm and (b) decision-making often rests with the tenant or landlord alone, it seems evident that distortions in resource use should occur.[17] The important need is for empirical research which employs relevant economic hypotheses and provides estimates of the effect of such arrangements as those outlined.

[17] We have discussed only the situation of competing products. A similar but somewhat different outcome can be outlined for complementary products. While we have summarized these conditions, they are not included because of space limitations. Too, there are other leasing arrangements such as joint decisions by landlord and tenant and cash premiums on specific crops which may cancel effects such as those discussed in this paper. These variations are quite obvious.

THE SOVIET CITRUS INDUSTRY

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In 1914 Russia had about 160 hectares (one hectare is equivalent to approximately 2.5 acres) under citrus fruits, most of which were tangerines. With the beginning of World War I, the import of citrus fruits had ceased, and the Russian government began expanding its citrus acreage; thus, by 1917 Russia had approximately 500 hectares of citrus fruits. The citrus industry as a whole was then, as it is now, located in Georgia, which is located on the eastern Caucasus.

Available statistics show that in 1932 Georgia produced 12.7 million citrus fruits, and that in 1936 this republic had 3,280 hectares occupied by citrus trees. With the establishment of various five-year plans, the Soviet government enlarged its citrus acreage and on January 1, 1940, Georgia had 17,122 hectares in citrus fruits. At that time it was expected that by January 1, 1945, the Soviet citrus industry would occupy 40,000 hectares.[1] According to this plan the Soviet citrus industry was to expand in hectares as follows:[2]

JANUARY 1	TOTAL	TANGERINES	LEMONS	ORANGES
1940 (actual)	17,122	12,950	3,609	563
1941 (actual)	24,449	15,415	7,975	1,059
1942 (planned)	27,322	17,039	8,578	1,705
1943 (planned)	30,742	18,939	9,098	2,705
1944 (planned)	34,887	20,639	9,748	4,500
1945 (planned)	40,000	22,000	10,500	7,500

As these data show, by January 1, 1945, the Soviet Union expected to expand its citrus industry by more than twice its 1940 acreage, with the greatest increase in oranges, followed by lemons and then by tangerines. Incidentally, it was recommended that the American "Navel" orange and another Russina variety called "Korolek" be planted. The Russians also have a small acreage under grapefruit, but its output is so insignificant that it may be completely ignored.

Tangerines comprised over 98 per cent of the citrus output. On January 15, 1941, the following number of various fruits were harvested in Georgia:[3]

FRUIT	NUMBER	PERCENTAGE
Tangerines	412,500,000	98.3
Lemons	3,854,000	0.9
Oranges	3,670,000	0.8
Total	420,024,000	100.0

[1] *Izvestia*, Apr. 26, 1940.
[2] *Ibid.*, Apr. 26, 1940 and Feb. 25, 1941.
[3] *Ibid.*, Jan. 15, 1941.

The above production represents 98.7 per cent of the total Soviet citrus crop. Published data show that the 1940 citrus harvest was 425,500,000 fruits, which no doubt includes the production of grapefruits.[4] According to the above plan, the 1944 citrus crop was expected to be 3.0–3.5 billion fruits, or approximately 8 times greater than was harvested in 1940, which suggests that in 1944 the Soviets expected to have a greater number of fruit bearing trees than in 1940. At full productivity, these 40,000 hectares of citrus trees were anticipated to produce 14.0–15.0 billion fruits.[5] It was also planned that during the period from 1941 to 1944 the Soviets would be able to construct 32 new packing plants with a capacity of 1.7 billion of fruits, 8 new canning plants with a capacity of 40 million cans of fruit juice, and another 6 canning plants with a capacity of 6 billion cans of various fruit products.

No doubt exists that the Soviet government intended to expand its citrus industry in Georgia. To achieve the expected goal, the Soviets made plans to drain about 200,000 hectares of the rich Kolhidsk lowland, located in the valley where muddy waters of the river Rion flow. It is here the Soviet government planned to create its own California and Florida. At the same time, plans were made to introduce citrus fruits to the Azerbaidzhan Republic on the Caspian Sea, the Crimea, the valleys of Atrek and Sumbar of the Turkmen Republic, and in the southern Tadzhik Republic.

Thus, when World War II started in the summer of 1941, the Soviet citrus industry was in a much better position to supply the needed citrus products to the consuming public of the north than it was in 1914. The 1941 harvest was expected to be 50 per cent greater than it was in 1940.[6] Reports from individual orchards indicated that the 1941 harvest was to be heavier than in 1940. The state farm "Zikhisdziri" expected to harvest over 30 million fruits, which was 5 millions greater than in 1940. The state farm "Lenin" planned to gather 2 million fruits and the state farm "Kirov" anticipated to collect twice as much as in 1940.

But World War II created maladjustment in the Soviet citrus industry. Although the Germans were unable to reach and to occupy the citrus growing regions, other factors interfered with the productive forces of the industry. Labor, chemicals for sprays, fertilizer, tin for the cans, wooden containers and shipping facilities forced the citrus industry to change its plans and practices. Scarcity of these factors was felt even in 1940, when the Soviets began to prepare for the war, and in 1941 availability of these scarce factors was even more difficult. For example, the citrus fruits in Georgia are ready to be harvested in the middle of November. The estimated number of boxes required for the 1940 crop was 450,000 containers, and at the end of October, Georgia had only 250,000 boxes on hand. These boxes were manufactured in Archangel on the White Sea and were shipped to the Caucasus by railroad. The nails for boxes were shipped from various industrial centers of the Union and because of the confusion created by the preparedness for the war, in many cases nails were too large for the boxes. The prob-

[4] *Ibid.*, Feb. 1, 1949.
[5] *Ibid.*, Apr. 26, 1940.
[6] *Ibid* , Nov. 5, 1941.

lem of hiring experienced pickers, graders, and packers was difficult in 1940, and during 1941 it became a real danger for the crop.[7]

In prewar years citrus fruits, upon being picked, graded, and packed, were shipped from the Caucasus by boats to various ports of the Black Sea from which they were dispersed to various parts of the Soviet Union. In the 1940–1941 period, the Georgian citrus growers expected to ship through their own port, Batumi, 2,500 carloads of tangerines, oranges, and lemons.[8] Of this amount, 2,000 carloads of tangerines and oranges were to be moved to Odessa. On the whole, in 1941 the cargo boats of the Black Sea fleet expected to move to Odessa about 4,000 carloads of citrus fruits produced in Georgia. Incidently, it is interesting to note the degree of maladjustment which the planned economy may experience when a certain segment of its economy is expanding while the other related factors remain constant. This happened to the citrus industry. In 1940 Odessa's storage capacity for tangerines was 200 carloads. Because of the sudden increase in production the actual receipt was 400 carloads, which resulted in a heavy loss of the crop already harvested and shipped to Odessa.[9] Thus, the unexpected good yield of the citrus industry created new problems which had to be solved before further expansion could be made. This maladjustment, however, was solved by the beginning of the war.

By November, 1941, the Germans occupied Odessa and the Crimea, through which citrus fruits were shipped from Georgia, and by November, 1942, the Germans were at the northern border of the Georgian Republic. There was no other means by which the bulky fruits could be shipped to unoccupied parts of the Soviet Union. The citrus growers, being unable to dispose of their fruits, devoted their efforts to other crops, neglecting the citrus orchards, the output of which declined. Some of the land previously under citrus fruits now was used for more urgently needed crops, such as tobacco. At the same time due to shortages in labor and chemicals, pests and diseases rapidly multiplied. These conditions existed throughout the war period.

Rehabilitation of the Soviet citrus industry may be traced to 1945. The Soviet press reports that the 1945 citrus crop was good. The largest state farm "Berya" planned to harvest 3 million tangerines, 1.2 million lemons and 700,000 oranges.[10] Another state farm "Esheri" by October, 1945, harvested 30,000 lemons.[11] The whole Soviet citrus industry in 1945 produced 301.7 million fruits, or about 41 per cent of the 1940 output. This indicates the degree of inefficiency that existed during the war.[12]

In 1946 intensification of production resulted in a greater output. By 1946 labor, chemicals, and equipment to combat the pests and diseases, and packing materials were allocated in greater amounts. At the same time many trees

[7] *Pravda*, Oct. 20, 1940.
[8] *Izvestia*, Oct. 13, 1940.
[9] *Ibid.*, June 21, 1941.
[10] *Ibid.*, Nov. 25, 1945.
[11] *Ibid.*, Oct. 26, 1945.
[12] *Ibid.*, Feb. 25, 1947.

reached the fruit bearing age and, according to the Soviet press, the 1946 citrus crop was excellent. The collective farm "Kobuletski" expected to harvest not less than 2 million fruits, or 4 times as many as in 1945. The state farm "Kviriksk" planned to collect 5 million tangerines and 100,000 lemons, or 1.5 million fruits more than in 1943. The state farm "Mukhaestatsk" anticipated gathering 2.5 million fruits.[13] Other orchards reported an abundant crop too. As a whole, the industry in 1946 harvested 578 million fruits, or 35.8 per cent over the 1940 output.[14] The scarcity of citrus fruits in other parts of the Soviet Union was so great that by the beginning of January, 1947, approximately 470 million fruits, or over 81 per cent of the total crop was shipped to Moscow, Leningrad, the Ukraine, the Baltic states, Central Asia and to other parts.[15]

In 1946, a new five-year plan (1946–1950) became the law of the land. The citrus industry was ordered to rehabilitate its orchards and to expand its acreage and output by 1950 to approximately the same level as was assigned under the old prewar five-year plan ending in 1943, the progress of which was interrupted by the war:

YEAR	U.S.S.R.	GEORGIA
	hectares	*hectares*
1946	—	18,100[16]
1947	20,800[17]	19,000[18]
1948	22,000[19]	20,500[20]
1949	27,500[17]	22,500[21]
1950	—	29,100[16]
1955	50,000[19]	40,000[21]

According to this plan, between 1946 and 1950 Georgia was ordered to expand its citrus acreage by 11,000 hectares, of which 3,000 hectares were to be oranges, and 3,000 hectares lemons. The other regions, which under the old five-year plan were assigned to develop their own citrus orchards, now were forced to plant nothing but oranges and lemons. Under this plan Georgia was to be the base for the production of tangerines. The plan also provided means by which in 1949 all low-yielding trees were to be replaced with high-yielding trees, which were to be selected for their frost resistance, early maturity, high yield and for the general adaptability to soil conditions. The citrus growers were instructed to eradicate by 1949 all the packets of diseases and pests. To do so, chemicals for spraying were allocated in greater quantities, and even in 1947 Georgia received 84,000 tons of

[13] *Ibid.*, Nov. 3, 1946.
[14] *Ibid.*, Feb. 25, 1947.
[15] *Ibid.*, Jan. 4, 1947.
[16] *Planovoe Khozaistvo*, Feb. 1946, p. 126.
[17] *Sovietskaia Agronomia*, Mar. 1947, pp. 14–15.
[18] *Izvestia*, Apr. 17, 1947.
[19] *Ibid.*, Nov. 17, 1948.
[20] *Ibid.*, Feb. 25, 1947.
[21] *Ibid.*, Dec. 21, 1948.

mineral fertilizer for its orchards. The 1950 citrus fruits acreage for the Soviet Union as a whole may be estimated at 36,300 hectares.

In 1947, citrus acreage was increased by approximately 5 per cent and production was expected of "not less than 600 million fruits," or an increase of about 4 per cent over the 1946 harvest. This increase in production was expected through more efficient harvesting practices. Of the expected harvest about 40 million lemons and 20 million oranges were anticipated. Thus, in 1947, lemons comprised about 6.6 per cent of the total Soviet citrus output, oranges were expected to be 3.3 per cent, and tangerines comprising about 90.0 per cent of the total citrus crop. It is this scarcity of oranges and lemons which explains the emphasis put on these fruits in 1946–1950 plan.

It is interesting to note that in 1940 lemons comprised about 0.9 per cent and oranges 0.6 per cent of the total Soviet citrus crop. However, in 1947 many lemon and orange trees which were planted before World War II became productive; this explains the increase in these fruits. Another fact must be considered, and this is that although the Georgian citrus acreage in 1947 was 90.3 per cent of the total Soviet citrus acreage, 93.2 per cent in 1948, and 81.8 per cent in 1949, the acreage outside Georgia may be ignored for the present, for even in 1950 these orchards were not in a fruit bearing stage.

Since 1946 the Soviet press has been filled with pledged production goals. Whole regions, republics, districts, independent industries, individual collective and state farms, and even individual producers, pledged to produce a given amount of goods. The interest of these pledges lies not in the disparity between the amount pledged and actual output but rather in the potential productivity. It may indicate that a given industry, such as the citrus fruit, by increasing its efficiency without additional outlay in investment, may increase its output. Georgia, not to lag behind this movement, also pledged to increase its output in 1947 and 1948 as follows:

REGION	NUMBER OF CITRUS FRUITS	
	1947[22]	1948[23]
Adzhar	390,000,000	500,000,000
Abkhazian	120,000,000	130,000,000
Makharadsevsk	72,000,000	83,000,000
Others	18,000,000	37,000,000
Total	600,000,000	750,000,000

According to the above table, Georgia in 1948 was to produce 25 per cent more than was pledged in 1947. However, the 1948 plan failed and only 695,500,000 fruits were harvested, representing 92.7 per cent of the planned output.[24] It is

[22] *Ibid.*, Apr. 17, 1947.
[23] *Ibid.*, June 12, 1948.
[24] *Ibid.*, Feb. 1, 1949.

also interesting to note that on the basis of 8 per cent of the pledged harvest, oranges and lemons were to make up 18.8 per cent of the total 1948 crop against 9.9 per cent in 1947.

On October 24, 1948, the famous Soviet reforestation plan became effective. Under this plan during 1949–1950 the Soviet Union anticipated planting 1,200,000 citrus trees in the Crimea, the Kuban, the Azerbaidzhan Republic, the Uzbek S.S.R., the Tadzhik S.S.R., the Turkmen S.S.R., the Dagestan A.S.S.R. and in the Moldavian Republic.[25] This means that about 10,000 hectares of marginal land were to be planted under citrus fruits. According to this plan, the Uzbek S.S.R. in 1949–1951 was to plant 1,305 hectares of citrus and other subtropical fruits.[26] The Moldavian Republic during 1949–1950 was to plant 1,208 hectares of tangerines, oranges and lemons.[27] And to assist the citrus growers in scientific research, the government in July, 1950, organized a commission under the leadership of a well known botanist, P. A. Baranoff, to study various problems dealing with the development of the citrus industry.

According to this plan, Georgia in 1955 is anticipating producing 2.0–2.5 billion citrus fruits. At the rate at which oranges are being produced, it is reasonable to assume that by 1955 about 20 per cent of the total Soviet citrus crop will be oranges and lemons.

In comparison to the 98.0 per cent in the Soviet Union, only 3.2 per cent of the United States citrus crop during the 1935–1944 period were tangerines.[28] A comparison of the Soviet with the United States citrus industries is difficult because the Soviets measure their production in numbers of individual fruits, whereas in the United States it is counted in boxes. However, if we assume that it takes 210 Soviet oranges, 290 Soviet lemons and 280 Soviet tangerines to fill the standard box used in the United States, then a comparison of production measured in number of boxes for each fruit may be estimated as follows:

PRODUCT	UNITED STATES[28] NUMBER OF BOXES (AVERAGE 1935–1944)	SOVIET UNION NUMBER OF BOXES (1940)
Oranges	78,470,000	17,500
Lemons	11,520,000	13,300
Tangerines	2,980,000	1,473,200
Total	92,970,000	1,504,000

In 1940, production of these fruits in the United States was 102,746,000 boxes. Thus, in 1940 the Soviet Union produced less than 2 per cent of the output recorded for the United States. The 1955 Soviet citrus production may also be estimated at a total of 7,356,000 boxes, while the United States production,

[25] *Ibid.*, Nov. 17, 1948.
[26] *Ibid.*, Nov. 18, 1948.
[27] *Ibid.*, Mar. 13, 1949.
[28] *Agricultural Statistics 1947*, USDA, p. 182.

even in 1947, was 127,250,000 boxes. It is because of this shortage of citrus fruits that the Soviet Union must rely on other sources for the needed cheap supply of vitamin "C".

In 1940 the Russians found that among various available sources of vitamin "C," the leaves of the grapevine contain 3–4 times more vitamin "C" than there is in lemons and 10 times more than in cabbage. Plans were made to expand this source of vitamin "C" in 1941, but the war interrupted this plan.

All this leads to the conclusion that the Soviet Union was, is, and shall be deficient in citrus fruits, because of the scarcity of land required for the industry to supply 224 millions of Soviet consumers. This also suggests that under more favorable conditions the United States could find a potentially expanding market among the Russians if and when American export could be established with friendly Russians.

RECENT TRENDS AND DEVELOPMENTS IN THE FLUE-CURED TOBACCO EXPORT TRADE[1]

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On April 26, 1951, Congressman Harold D. Cooley, Chairman of the House Committee on Agriculture, called a conference of industry and government officials to discuss the United States leaf tobacco export situation. The conferees were particularly concerned with discriminations against American tobacco by a number of foreign countries. Action growing out of this conference, as will be developed below, has succeeded in alleviating export difficulties in the case of Western Germany. These recent developments are significant in that they indicate the importance of the export trade to the flue-cured industry, reflect new problems growing out of postwar changes in the relative importance of export outlets, and indicate the postwar importance of the European market.

I

Basic factors in terms of which recent flue-cured export developments should be evaluated are world production and consumption trends, the prevalence of international trade restrictions, and the large amount of governmental revenue secured from tobacco by European nations. Practically all the European countries receive substantial amounts of revenue from tobacco through the medium of customs duties, excises, or the operation of a monopoly. Because of the part tobacco plays in their fiscal systems, many European exchange control authorities accord sympathetic treatment to requests for exchange to purchase foreign leaf. United States flue-cured exports, however, have been adversely affected by discriminatory measures on the part of importing nations. These measures include the nationalistic policies pursued by some tobacco monopolies, bilateral trade agreements involving tobacco, and the British Imperial Preference System.

Since flue-cured tobacco is primarily used in the production of Virginia cigarettes, made entirely from flue-cured tobacco, and blended cigarettes, containing predominately flue-cured tobacco, world production and consumption of flue-cured has depended basically on the extent of consumer preference for Virginia

[1] The writer has drawn extensively on information obtained from discussions with industry and government officials. In this connection, the writer is particularly indebted to John B. Hutson, President of Tobacco Associates, Inc.; J. Con Lanier, Executive Secretary and General Counsel of the Leaf Tobacco Exporters Association, Inc.; George W. Thomas, Chief of the ECA Tobacco Branch; Elmer W. Hallowell, formerly Chief of the Tobacco Branch of the Department of Commerce; George E. Powell, Chief of the Program Analysis and Commodity Research Division of the Production and Marketing Administration; Arthur G. Conover, Agricultural Economist in the Bureau of Agricultural Economics; J. Barnard Gibbs, Head of the Tobacco and Tropical Products Division of the Office of Foreign Agricultural Relations; and Clarence E. Pike, Agricultural Economist in the Office of Foreign Agricultural Relations.

and blended cigarettes. As a result of a continuing shift in consumer preferences to milder tobaccos, there has been a world-wide, long-term trend toward cigarettes. This trend was greatly accelerated during and after World War I.

The increased demand for cigarettes greatly stimulated the consumption of both flue-cured and oriental tobaccos in the post-World War I period. The Virginia cigarette began to dominate the tobacco consumption picture in the United Kingdom and in China in the twenties and these countries, therefore, became the most important foreign outlets for American flue-cured leaf during the inter-

TABLE 1

Estimated Factory Consumption of Flue-Cured Tobacco in Selected Countries[a]
(Millions of pounds)

COUNTRY	AVERAGE, 1934–38	1948
United States[b]	302.1	638.4
United Kingdom	200.0	240.0
Belgium	4.3	15.0
Ireland	8.7	12.5
France	1.1	1.0
Netherlands	9.1	23.1
Norway	2.0	4.5
Portugal	0.7	3.9
Sweden	2.7	6.6
Switzerland	0.4	2.8
Denmark	2.8	5.8
Austria	0.3	3.0
Italy	0.8	11.0
India	13.0	60.0
Southern Rhodesia	2.0	5.0
Canada	27.0	64.0
Australia	15.0	26.0

[a] Dry weight basis.

[b] Unstemmed equivalent basis; for years beginning July 1.

Source: Compiled from unpublished material in the files of the Office of Foreign Agricultural Relations by C. E. Pike, Agricultural Economist.

war period. Relatively much smaller amounts were exported to a large number of other countries and were used in the manufacture of Virginia cigarettes primarily for the luxury trade. In central Europe, Turkish cigarettes, made from oriental tobaccos, came to be almost exclusively used.

The global trend to the cigarette was not only accelerated during and after World War II, but it evolved into primarily a trend to the use of blended cigarettes. There was, also, a shift in consumer preference in a number of Central and Northern European areas from oriental cigarettes to blended cigarettes. The shift to blended cigarettes has been especially pronounced in Western Germany.

The increased demand abroad in the post-World War II period for blended cigarettes has resulted in substantially increased foreign consumption and production of flue-cured tobacco. World consumption data are inadequate and not

generally available, but Table 1 (prepared for the writer by C. E. Pike of the Office of Foreign Agricultural Relations) gives some indication of this increase. Unfortunately, the postwar estimates given in Table 1 do not indicate the phenomenal increase in Western German consumption during the past three years.

During the past five years production of flue-cured tobacco in Canada, Southern Rhodesia, and India (which together with China and Japan account for the greatest proportion of foreign production) has been rapidly increasing. Increasing consumption of flue-cured in Canada and India (see Table 1) has tended to absorb production increases in those countries. In contrast, practically the entire Southern Rhodesian production is exported. In the 1935–39 period the United States furnished approximately 70 per cent of world production, while in the 1948–50 period American production accounted for approximately 62 per cent

TABLE 2

World Production of Flue-Cured Tobacco

(Millions of pounds)

COUNTRY	AVERAGE, 1935–39	1950[a]
United States	863.8	1,255.8
Canada	54.6	102.4
China	150.9	80.0
India	31.3	84.0
Japan	62.4	91.7
Southern Rhodesia	24.6	105.5
Other countries	50.3	187.5
Total	1,237.9	1,906.8

[a] Preliminary.

Source: Foreign Agriculture Circular FT-5-51, Office of Foreign Agricultural Relations, USDA.

of total world production.[2] The increase in the proportion of world production attributable to foreign areas is especially significant in view of the fact that United States production has increased more than 50 per cent since the prewar period. World production data is presented in Table 2.

As a result of changes in flue-cured consumption and production abroad, there has been a change in the relative importance of export outlets. Flue-cured exports have been decreasing to the Far East, while they have been increasing to Europe. The decline in exports to the Far East reflects increasing production in India and the fact that China has not been an important outlet for flue-cured since 1940 because of disturbed political and economic conditions in that country. The increase in exports to Europe reflects increased consumer preference for blended cigarettes, particularly in the Netherlands, Belgium, Denmark, Norway, Sweden, Austria, and Western Germany.

[2] *World Flue-cured Tobacco Production at Record Level*, Foreign Agriculture Circular FT-5-51, Office of Foreign Agricultural Relations, USDA (March 23, 1951).

During the thirties, as Table 3 shows, more than half of the United States flue-cured exported went to the United Kingdom. Markets for flue-cured exports are still concentrated, because over half of the flue-cured exports have been going to the United Kingdom and Western Germany since 1948. Other countries, however, are now taking larger amounts and accounting for a greater proportion of total flue-cured exported than in the interwar period. Especially important gains have been made in exports to Ireland, New Zealand, the Netherlands, Belgium, Denmark, and Switzerland.

Because of the importance of the United Kingdom and Western German markets, postwar developments affecting flue-cured exports to these countries will be considered in more detail.

TABLE 3

United States Flue-Cured Tobacco Exports

(Thousands of pounds)

IMPORTING NATION	AVERAGE 1935–39		1949–50[c]	
	Amount[a]	Per cent	Amount[a]	Per cent
United Kingdom	203,053	63.7	153,625	39.7
Western Germany	4,012[b]	1.3	53,587	13.8
China	38,025	11.9	6,969	1.8
Other countries	73,775	23.1	172,937	44.7
Total	318,865	100.0	387,118	100.0

[a] Export weight.

[b] All Germany.

[c] July 1, 1949 through June 30, 1950.

Source: *Annual Report on Tobacco Statistics*, Production and Marketing Administration, USDA.

II

The two factors which have been primarily responsible for fluctuations in United Kingdom imports of United States flue-cured during the postwar period are fluctuations in the dollar position of the United Kingdom and the nationalistic policies of the British government, recently accentuated by the Labour administration. The United Kingdom, faced with low stocks and rapidly increasing domestic consumption, bought heavily in the immediate postwar period, taking in 1946 two-thirds of all American flue-cured exports.[3] British Loan dollars were available at this time and aided in making possible the large United Kingdom purchases.

Despite the British Loan, 1947 found the United Kingdom with a serious dollar deficit, and action was accordingly taken to reduce American imports. The allocation of dollar exchange to tobacco imports was cut in order to reduce imports of United States leaf one-third during the period from mid-1947 to mid-1948.

[3] *Annual Report on Tobacco Statistics*, Production and Marketing Administration, USDA (1947).

A further blow to the export trade occurred in October, 1947, when the British buyers were withdrawn from the United States market.[4] Accordingly, tobacco exports to the United Kingdom from July, 1947, to February, 1948, dropped 50 per cent below the same period of the previous year.[5]

The Tobacco Division of the Board of Trade decided in early 1947 that, in view of the serious dollar deficit, a reduction to the prewar level of British tobacco consumption, which in 1946 was a third over 1938, was desirable. Accordingly, the import duty was increased in April, 1947, from $7.16 per pound to $11.05 per pound.[6] After the resultant increase in prices of tobacco products, British consumption dropped about 20 per cent. Import duties were again increased on April 7, 1948, from $11.05 to $11.72 per pound.[7] This increase, as the other did not have the effect of reducing British consumption to the prewar level.

TABLE 4

Flue-Cured Exports to the United Kingdom

YEAR ENDED JUNE 30	THOUSANDS OF POUNDS
1935–39 average	203,053
1946	300,565
1947	259,702
1948	126,508
1949	147,940
1950	153,625
1951[a]	131,727

[a] July, 1950 through February, 1951.

Sources: *Annual Report on Tobacco Statistics*, (1950); and *Report of Tobacco Associates, Inc.*, Vol. 4, No. 4, (April 1951).

After the inauguration of the Economic Cooperation Administration program in the spring of 1948, the dollar earnings of the United Kingdom were supplemented by United States grants and British purchases of United States flue-cured increased somewhat in the 1948–49 and 1949–50 marketing years as Table 4 shows.[8] Exports to the United Kingdom, however, dropped off in the 1950–51 marketing season reflecting, primarily, larger purchases of Southern Rhodesian leaf.

Although there have been fluctuations in the volume of British purchases, the trend is downward. United States flue-cured comprised 46 per cent of the total tobacco imports of the United Kingdom in 1950 as compared with 75 per cent of the total leaf imports in the years 1934–38.[9] The decline in United Kingdom imports is a result of a decline in the proportion of United States flue-cured

[4] *The Tobacco Situation*, Bureau of Agricultural Economics, USDA (Jan. 1948).
[5] *Ibid.*, (Apr. 1948).
[6] *Ibid.*, (Oct. 1947).
[7] *Ibid.*, (Apr. 1948).
[8] A marketing year extends from July 1 to June 30.
[9] *Report of Tobacco Associates, Inc.*, Mar. 1951.

used to total tobacco used by United Kingdom manufacturers. In 1938 United States flue-cured accounted for approximately 73 per cent of total leaf used by British manufacturers; this ratio had dropped to approximately 63 per cent in 1949 and to about 57 per cent in 1950.[10] An explanation of this downward trend is to be found in British commercial policy.

The government of the United Kingdom has pursued assiduously throughout the postwar period a policy of encouraging the use of flue-cured secured from empire sources. This policy has been implemented through mixing ratios, the exchange control mechanism, and restrictive agreements. Mixing ratios, providing for the mandatory inclusion of minimum amounts of empire flue-cured and oriental tobacco in all cigarettes manufactured for domestic consumption, were instituted during the war to reduce the consumption of American leaf and have been continued during the postwar years.

Each year British exchange authorities, in consultation with the Tobacco Division of the Board of Trade, determine the overall amount of dollar exchange to be used for the purchase of United States tobacco, allocate this exchange among the various domestic manufacturers, and issue import licenses to cover purchases authorized. Importers of empire leaf, in contrast, operate under an unlimited license system.[11] The United Kingdom, moreover, has reserved a portion of the British market for empire flue-cured. In 1947 a government-sponsored agreement was concluded between the Tobacco Advisory Committee to the Board of Trade and the Southern Rhodesian Tobacco Marketing Board whereby United Kingdom manufacturers have agreed to purchase the major portion of the Southern Rhodesian crops through 1956.[12]

British purchases of empire flue-cured from Canada, India, and Southern Rhodesia were more than three times as great in 1950 as in the 1934–38 period.[13] Production in Southern Rhodesia, the most important flue-cured exporter of the empire areas, has increased from 20 million pounds in the mid-thirties to over 100 million pounds in 1950.[14] A Rhodesian production goal of 130 million pounds was set for 1951 but will not be achieved because of unfavorable weather conditions. According to June, 1951, estimates, Rhodesian production will be substantially less than any of the recent crops and United States exports to the United Kingdom in the 1951–52 marketing year are expected to increase as a result.[15]

For several years there has been growing concern in Southern Rhodesia over the displacement of food crops by tobacco and the Southern Rhodesian government has tended to discourage increases in the acreage devoted to flue-cured

[10] *Ibid.*

[11] Anna H. Carroll, "Britain's Tobacco Position—War and Postwar Oversea Trade," *Foreign Commerce Weekly*, Mar. 8, 1947, p. 9.

[12] For some details of this agreement see George W. Van Dyne, *Trends in South and East Africa Affecting United States Trade in Tobacco*, Foreign Agriculture Report No. 55, Office of Foreign Agricultural Relations, USDA (Oct. 1950).

[13] *Report of Tobacco Associates, Inc.*, op. cit.

[14] *Annual Report on Tobacco Statistics*, op. cit.

[15] Based on data furnished by Tobacco Associates, Inc. and a recent discussion with C. E. Pike of the Office of Foreign Agricultural Relations.

production.[16] Indications are that the phenomenal growth of Southern Rhodesian production may slacken for a time and, therefore, that the decline in the consumption of United States flue-cured in the United Kingdom may be arrested for the immediate future. In view of the extensive amount of additional land suitable for flue-cured culture available in Southern Rhodesia, however, long-term prospects for stabilizing the volume of United States flue-cured exports to the United Kingdom at near current levels are unfavorable.

III

Prior to World War II, about 90 per cent of German cigarette consumption consisted of oriental cigarettes. Following the war, American blended cigarettes were introduced into Germany by American soldiers. The popularity of these cigarettes with the German people, most of whom were heretofore unfamiliar with them, was phenomenal. The high postwar German demand for blended cigarettes held out an opportunity for the expansion of United States flue-cured exports.

The military government, however, opposed the importation of tobacco into Germany and did not allow the importation of United States flue-cured legally into Germany in the early postwar years. The attitude of the military government was naturally a source of concern to American exporters and the industry worked energetically to promote a change in policy. As a result of these efforts and in an attempt to combat the black market and improve German morale, some tobacco was allowed to be imported in 1947. The first legal shipment since before the war was made in July of 1947.[17]

Although the German market was reopened in 1947, United States flue-cured did not begin to move to Western Germany in large quantities until after the inauguration of the Economic Cooperation Administration program in 1948. Over 9 million pounds (farm-sales-weight) of United States flue-cured was exported to Western Germany during the 1947–48 marketing year. Flue-cured exports to Western Germany increased to 49.6 million pounds in the 1948–49 marketing year and to 61.5 million pounds in the 1949–50 marketing year. During the first nine months of the 1950–51 marketing year, 56.5 million pounds were shipped to Germany.[18]

The increasing flue-cured exports to Western Germany reflect overwhelming consumer acceptance of blended cigarettes. The leading German cigarette manufacturer estimated for J. B. Gibbs in 1949 that 85 to 90 per cent of German consumers preferred blended cigarettes to oriental cigarettes.[19] A recent survey of the Western German market indicates that this is still the case.[20]

[16] *Southern Tobacco Journal*. Feb. 1951, p. 9.

[17] *Report of Tobacco Associates, Inc.*, May 1951.

[18] *Ibid.*

[19] Based on discussion with J. B. Gibbs, Head of the Tobacco and Tropical Products Division of the Office of Foreign Agricultural Relations.

[20] J. B. Gibbs, *Market for U. S. Tobacco in Western Germany*, Foreign Agriculture Circular FT-9-50 (July 31, 1950).

Most of the United States leaf imported by Western Germany since the reopening of the market in 1947 has been financed with Economic Cooperation Administration funds or through the negotiation of private barter transactions between American exporters and German importers involving the trading of German goods for United States tobacco. In ECA's first two years, practically all the leaf moved under ECA grants. Since early 1950, barter transactions have assumed increasing importance as German importers and American exporters have attempted to expand the flue-cured trade in the face of a growing unwillingness on the part of the government of Western Germany to allocate earned exchange for the purchase of United States leaf.

In recent years Greece and Turkey have been trying to recapture the markets they supplied with oriental tobacco prior to the war. The Greek government sent a mission to Germany in 1949 to attempt to negotiate an agreement for the exchange of Greek tobacco for German manufactured products. The Bonn government was receptive to such negotiations, but no agreement was reached because of the opposition of the German trade to accepting increased amounts of oriental tobacco in view of the consumer preference for flue-cured leaf.

Although the 1949 mission did not succeed, there have been pressures on the German trade since 1949 to expand imports of oriental leaf. Some German interests and the Bonn government have been interested in expanding exports to Greece and Turkey. The Greek government has been interested in obtaining German chemicals and other manufactured products, and exports of tobacco, the most important Greek export, would offer a way to pay for them. During the the past year, some high ECA officials in Greece and Germany have become interested in reestablishing the postwar pattern of trade between Greece and Germany based on Greek tobacco exports.

Attempts to increase imports of oriental leaf into Germany at the expense of flue-cured are meeting with some success. Unofficial reports reaching the industry in this country indicate that in recent months some sort of agreement was reached between the government of Greece and the Bonn government. Developments since mid-1950, moreover, indicate that the German government has been attempting to discourage imports of United States tobacco.

The Organization for European Economic Cooperation approved the use of 12.1 million dollars of ECA funds for the purchase of American tobacco by Western Germany during the 1950–51 marketing year. The German and the United States tobacco trade expected that the balance of German requirements for the period—probably 18–23 million dollars worth of tobacco—would be purchased through barter transactions and the use of earned dollars.[21] By May, 1951, however, the German government had only requested the allocation of 5 million dollars of the approved amount for the purchase of United States leaf. Beginning about October, 1950, moreover, United States exporters and German importers began experiencing increasing difficulty in getting barter transactions approved by the German government and in getting earned exchange allocated for the

[21] *Report of Tobacco Associates, Inc.*, op. cit.

purchase of United States leaf.[22] It was this situation which led to the convening of a conference on April 26, 1951, by Congressman Cooley to discuss the United States leaf tobacco export situation.

The April 26 conference authorized Congressman Cooley to appoint a committee to study the tobacco export situation, particularly in regard to Western Germany, and determine what further action was desirable. Cooley immediately appointed a committee of three Senators and six members of the House of Representatives from tobacco-producing areas. Conferences were held by this committee during the week April 30 to May 5 and, at one of them, Secretary of Agriculture Brannon, Assistant Secretary of State Thorp, and ECA Administrator Foster were present for the discussion.

As an outgrowth of these conferences, a mission composed of representatives of the Department of Agriculture and ECA left Washington for Bonn, Germany, on May 6 to discuss with officials of the Western German government the current situation in regard to United States tobacco. Members of the mission were Standley Andrews, Director of the Office of Foreign Agricultural Relations, J. E. Thigpen, Director of the Tobacco Branch of the Production and Marketing Administration, and E. N. Holmgreen, Chief of the Food and Agriculture Division of ECA. Hans Podeyn, Chief of the German ECA mission to Washington, also returned to Germany to participate in the discussions. The American mission conferred with Dr. Erhard, Minister of Economics, and other officials of the Western German government on May 9 and it was agreed that increased purchases of United States leaf would be made.[23]

The agreement reached at Bonn provided for an immediate German purchase of United States leaf and the working out of a program of purchases for the balance of 1951. This agreement was implemented in June, 1951, with the announcement that arrangements had been made for Western Germany to purchase an additional 10 million dollars worth of United States tobacco with ECA funds prior to the close of the 1950–51 marketing year.[24]

Negotiations concerning the projected program of purchases were continued in Washington on July 10, 1951, when Dr. Erhard, several officials from the Western German Economic Ministry, and Podeyn met with Cooley, other congressmen from tobacco-producing areas, and ECA, Agriculture Department and State Department officials. The German delegation indicated that Western Germany would be willing to purchase 40 million dollars worth of tobacco (approximately the quantity of tobacco purchased in the 1949–50 marketing year) during the 1951–52 marketing year provided adequate aid and cooperation were received from the United States.[25] Apparently the aid envisaged is an additional ECA grant; the cooperation envisaged is an increased use of private barter transactions on the part of American exporters and German importers.

Postwar experience has demonstrated the susceptibility of Western German

[22] *Ibid.*
[23] *Ibid.*
[24] *United States Tobacco Journal*, July 2, 1951, p. 16.
[25] *The Raleigh News and Observer*, July 11, 1951.

trade policy to the activities of pressure groups. The high postwar German consumer demand for flue-cured tobacco provides a basis not only for the maintenance but also for the expansion of flue-cured exports to Western Germany. The future volume of flue-cured exports to Western Germany, however, will likely depend upon the strength of pressures emanating from the United States as compared with pressures exerted by groups interested in increased German imports of oriental tobacco.

IV

In recent years flue-cured exports have been averaging nearly 100 million pounds more than the average of the late thirties, but, because of the more than doubling of United States consumption during the past ten years, they constitute a smaller proportion of total disappearance than formerly. Since World War II, exports have averaged slightly less than 40 per cent of total disappearance while during the thirties they ranged from 50 to 60 per cent of total disappearance.

The increasing foreign demand for flue-cured leaf is increasing potentialities for flue-cured exports. Whether these potentialities will materialize into a still larger export volume will depend upon the extent of exchange difficulties abroad, the relationship between American flue-cured prices and other tobacco prices, and the trade policies of the nations. Exchange difficulties have occupied a central position in recent years and, although the dollar shortage is less acute than formerly, may be significant in the future. If flue-cured prices rise substantially in this country, the level of United States flue-cured prices could be of considerable importance. An examination of the situations in the most important export outlets, however, indicates that developments in the commercial policies of the nations are likely to exert the most potent influence on the future volume of flue-cured exports.

BITUMINOUS COAL PRODUCTION DURING WORLD WAR II

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Prior to the outbreak of World War II, a number of economists in this country maintained a lively interest in the bituminous coal industry, which for some years had been faced with a host of serious problems stemming directly or indirectly from the existence of excess capacity. Their interest was among the forces leading to the passage during the 1930's of several important federal acts designed to cope with the problems of the bituminous coal industry. Since the outbreak of World War II, however, interest of economists in the bituminous coal industry appears to have lagged. Moreover, the few studies of the industry which have appeared since then have been concerned mainly with pre-war conditions and problems. To date, there has been no published analysis of the expansion which occurred in bituminous coal production during World War II.

The absence of such an analysis seems all the more surprising in view of the magnitude of that expansion and the important role which bituminous coal played during the war. Even before World War II, bituminous coal supplied more energy, as measured by British thermal units,[1] than any of the other fuels in use in this country. During World War II, however, the relative importance of bituminous coal as a source of energy increased. In 1944, the year of peak war-time fuel utilization, bituminous coal supplied 48.9 per cent of our total supply of energy from mineral fuels and water power, as compared with 43.8 per cent in 1938, the last full year of world peace. Even more significant, perhaps, is the fact that during 1942 and 1943, years which were so important in developing the huge war potential of the United States, bituminous coal alone supplied more energy, on a B.t.u. basis, than all the other mineral fuels and water power combined.

The increase in the relative importance of bituminous coal as a source of energy during a period when total energy requirements of the country were growing and when all the basic industries supplying energy were expanding their output, was only possible because the magnitude of the expansion in production was greater in the bituminous coal industry than in the other industries. In 1944 when the total supply of energy from mineral fuels and water power in the United States, in terms of B.t.u.'s, was 59.2 per cent higher than it had been in 1938, production of bituminous coal was 77.8 per cent higher than it had been in 1938. None of the other industries had achieved a comparable increase in output. Natural gas, the industry which came the closest

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[1] The term "British thermal unit" (hereinafter abbreviated to B.t.u.) refers to the quantity of heat required to raise the temperature of one pound of water 1°F. at its point of maximum density.

to the record of the bituminous coal industry, had an output in 1944 which was 61.6 per cent above that of 1938.

This huge increase in production of bituminous coal between 1938 and 1944 appears all the more noteworthy when it is realized that the bituminous coal industry was severely handicapped during at least a portion of this period by the loss of men to the armed forces and the resultant shortage of manpower, a problem which was complicated by the fact that women are not employed in coal mines.[2] Efforts of the Solid Fuels Administrator and others to secure the deferment of miners met with only limited success. By 1944 the number of men employed was only 393,347, or 10 per cent fewer than the 441,333 employed in 1938. Moreover, as a result of the loss of the younger miners to the armed services, the average age of men employed in the bituminous coal industry rose from 32 years at the outbreak of the war to about 45 years by 1944.[3]

TABLE 1

Annual Supply of Energy from Mineral Fuels and Water Power in the United States, 1938 to 1945

(In trillions of British thermal units)

YEAR	TOTAL	BITUMINOUS COAL	ANTHRACITE COAL	PETROLEUM		NATURAL GAS	WATER POWER
				Domestic production	Imports		
1938	20,833	9,132	1,171	7,043	153	2,468	866
1939	22,683	10,345	1,308	7,337	192	2,663	838
1940	25,216	12,072	1,308	7,849	247	2,860	880
1941	27,288	13,471	1,432	8,133	294	3,024	934
1942	29,331	15,267	1,532	8,043	71	3,282	1,136
1943	30,791	15,463	1,540	8,733	80	3,671	1,304
1944	33,176	16,233	1,618	9,732	260	3,989	1,344
1945	32,552	15,134	1,395	9,939	429	4,213	1,442

Source: United States Department of the Interior, Bureau of Mines.

The particularly great contribution of bituminous coal to the total energy requirements of the United States during 1942 and 1943 also suggests that the bituminous coal industry was able to respond to the increased demand for fuel more rapidly than the other industries. In fact, most of the war-time expansion in output of bituminous coal occurred relatively early. In 1942 output of bituminous coal was already 67.2 per cent higher than it had been in 1938. Natural gas, which here again was the closest runnerup, had an output in 1942 which was only 33.0 per cent above that of 1938.

[2] There is a superstition among coal miners that ill-fortune follows the presence of a woman in a mine. A recent government publication indicates that a few women were employed in surface operations during the war, but even this was resented by the miners. See U. S. Department of the Interior, *A Medical Survey of the Bituminous Coal Industry, 1947*, p. xxiii.

[3] U. S. Department of the Interior, *Annual Report of the Secretary for the Fiscal Year Ended June 30, 1944*, p. 128.

By far the greater part of the increase in bituminous coal production between 1938 and 1942 was accounted for by the rise in output of underground mines. During this period approximately 90 per cent of the output of bituminous coal came from underground mines. Thus while the rate of expansion for underground mines was considerably lower than the rate of expansion for strip mines, the tonnage involved was enormous. In 1942 production of underground mines

TABLE 2

Employment of the Bituminous Coal Industry in the United States, 1938 to 1945

YEAR	NUMBER OF MEN EMPLOYED				AVERAGE NUMBER OF HOURS WORKED PER WEEK	AVERAGE NUMBER OF DAYS WORKED PER YEAR
	Total	Underground	Strip pits	Others		
1938	441,333	370,004	7,877	63,452	23.5	162
1939	421,788	353,476	8,791	59,521	27.1	178
1940	439,075	365,013	8,983	65,079	28.1	202
1941	456,981	376,765	10,861	69,355	31.1	216
1942	461,991	374,654	12,893	74,444	32.9	246
1943	416,007	326,763	16,643	72,601	36.6	264
1944	393,347	301,461	21,035	70,851	43.4	278
1945	383,100	290,001	23,261	69,838	42.3	261

Source: United States Department of the Interior, Bureau of Mines, and United States Department of Labor, Bureau of Labor Statistics.

TABLE 3

Growth of the Bituminous Coal Industry in the United States, 1938 to 1945

YEAR	PRODUCTION (THOUSANDS OF NET TONS)			NUMBER OF MINES IN OPERATION		
	Total	Underground mines	Strip mines	Total	Underground mines	Strip mines
1938	348,545	318,138	30,407	5,777	5,312	465
1939	394,855	357,133	37,722	5,820	5,283	537
1940	460,771	417,604	43,167	6,324	5,686	638
1941	514,149	459,078	55,071	6,822	6,053	769
1942	582,693	515,490	67,203	6,972	6,138	834
1943	590,177	510,492	79,685	6,620	5,616	1,004
1944	619,576	518,678	100,898	6,928	5,688	1,240
1945	577,617	467,630	109,987	7,033	5,663	1,370

Source: United States Department of the Interior, Bureau of Mines.

in thousands of net tons was 515,490, as compared with 318,138 in 1938. Production of strip mines in thousands of net tons was 67,203 in 1942, as compared with 30,407 in 1938.

Among the factors responsible for the large rise in the output of underground mines were an increase in the number of mines in operation, an increase in the number of men employed, and greater mechanization. Of these factors, the first two appear to be of relatively small significance. The increase in the number of men employed underground was negligible, amounting to only 4,650, or 1.3

per cent of the total number employed in 1938. The increase in the number of underground mines in operation from 5,312 in 1938 to 6,138 in 1942 would appear on the basis of the figures alone to be of considerable importance. Most of this increase in number, however, occurred because of the reopening of small, non-mechanized mines with high production costs, which had been abandoned in the years when demand for coal was low. It was possible to put these mines back into operation rather quickly as the need for coal expanded, but their combined output and their contribution to aggregate production of bituminous coal was undoubtedly much smaller than a consideration of their numbers alone would indicate.

The growth of mechanization was probably of somewhat greater significance than either the increase in the number of men employed in underground mines or the increase in the number of mines in operation between 1938 and 1942.

TABLE 4

Mechanical Mining Equipment in Use in Bituminous Coal Mines in the United States 1938 to 1945

YEAR	POWER SHOVELS AND DRAGLINES IN USE IN STRIP MINES	UNITS IN USE IN UNDERGROUND MINES		
		Mobile loaders	Conveyors	
			Self-loading	Hand-loaded
1938	737	1,405	346	1,526
1939	914	1,573	559	1,834
1940	1,071	1,720	656	2,263
1941	1,321	1,985	788	2,807
1942	1,438	2,301	1,062	3,041
1943	1,839	2,525	1,226	3,191
1944	2,312	2,737	1,331	3,236
1945	2,439	2,950	1,383	3,385

Source: United States Department of the Interior, Bureau of Mines, and Bituminous Coal Institute, *1950 Bituminous Coal Annual*.

Although there were no basic changes in mining technique or in the type of machines used during this period, there was a steady increase each year in the number of mechanical loaders and conveyors used in underground mines, as Table 4 indicates.[4]

It seems highly likely, however, that the principal method by which underground mines succeeded in increasing their output so rapidly and by such substantial amounts was the more intensive utilization both of the facilities already in operation in 1938 and the manpower available to the industry. Average weekly hours of work in the bituminous coal industry rose 40 per cent between 1938 and 1942, changing from 23.5 in the earlier year to 32.9 in the latter year. During the same period the average number of days worked per year in the bituminous coal industry increased from 162 to 246, or 51.9 per cent.

[4] For further discussion see U. S. Department of Labor, Bureau of Labor Statistics, *Productivity in the Bituminous Coal Mining Industry: 1935–1948*, pp. 1–8.

Unlike the huge increase in bituminous coal production which occurred between 1938 and 1942, the much more moderate increase of 36,883 thousand tons which occurred between 1942 and 1944 was chiefly attributable to stepped up output of strip mines. Output of underground mines for 1944 was only 3,188 thousand tons higher than it had been in 1942.

The principal factor limiting further expansion in output of the underground mines was the shortage of labor, which was just beginning to be felt in the latter part of 1942, and became progressively more acute during the following years. Employment of men in underground operations declined from 374,654 in 1942 to 301,461 in 1944, a drop of approximately 20 per cent. During the same period underground mines in operation declined from 6,138 to 5,688. This decrease of approximately 8 per cent in the number of underground mines in operation was probably directly related to the manpower shortage, which made it impossible for many small non-mechanized mines to continue operations.

Average hours of work per week in the bituminous coal industry rose very substantially between 1942 and 1944, changing from 32.9 hours to 43.4 hours.[5] The average number of days worked per year also increased, although much more moderately, rising from 246 days in 1942 to 278 days in 1944. Further advances in mechanization of the underground mines were made too during this period;[6] but this factor, even together with more intensive utilization of the labor force, was insufficient to achieve further large gains in the output of the underground mines as the shortage of manpower became more acute.

Output of strip mines, on the other hand, not only continued to expand between 1942 and 1944, but expanded much more rapidly than it had during the earlier period. Strip mines, which are by their nature more highly mechanized and less dependent on hand labor than underground mines, were of course less vulnerable to the manpower shortage.[7] While the number of underground mines declined between 1942 and 1944, the number of strip mines in operation increased from 834 to 1,240. This increase in the number of strip mines in operation was accompanied not only by a rapid rise in the amount of mechanical equipment in use in strip mines, but also by an increase in the number of men employed in strip pits. In 1942 only 12,893 men were employed in strip pits. In 1944 the number of men employed in strip pits was 21,035. The absolute increase was not very large, but the relative increase was certainly great.

With more pits in operation, more machinery in use, and more men em-

[5] Secretary of the Interior Harold L. Ickes helped to make this increase possible when he "prevailed upon mine operators and labor to agree to lift their former 35 hour workweek limitation." U. S. Department of the Interior, *Annual Report of the Secretary for the Fiscal Year Ended June 30, 1943*, p. xvii.

[6] Continued production of these machines despite the prevailing material shortages was facilitated by the efforts of the Solid Fuels Administrator for War who acted as claimant for the bituminous coal industry before the War Production Board. See the annual reports of the Solid Fuels Administration for War, an agency of the Department of the Interior during the war years.

[7] In this connection it is worth noting that the productivity per man per day in strip mines during World War II was approximately three times as great as in underground mines.

ployed, the strip mines produced 100,898 thousand tons of coal in 1944, as compared with 67,203 thousand tons in 1942. Thus within two years output of strip mines increased by approximately 50 per cent. As a result of this rapid increase during a period when output of underground mines changed very little, the contribution of strip mines to total production of bituminous coal also rose. In 1942 strip mines accounted for only 11.5 per cent of total production. By 1944, however, they accounted for 16.3 per cent of the total.

SUMMARY AND CONCLUSIONS

Despite the fact that for some years bituminous coal had been losing ground to other fuels, it was still by far the most important basic source of energy in the economy of the United States at the outbreak of World War II, and its relative importance increased considerably in the course of the war. The huge war-time expansion in the output of bituminous coal which was responsible for this reversal of the pre-war trend is notable, not only for its magnitude, but also for the rapidity with which it was achieved.

Most of that expansion, which had already occurred by 1942, seems to be attributable in large measure to two related facts: the underground mines were operating at a very low level of capacity in 1938, and under-employment of serious proportions was prevalent among the miners. The bituminous coal industry was, therefore, in a position to respond to the wartime rise in demand for fuel without first undertaking any elaborate development or construction programs. The very conditions which made the industry a sorespot in our economy during most of the 1930's, thus proved of decided advantage after the outbreak of hostilities.

The much more moderate increase in the production of bituminous coal after 1942, on the other hand, is attributable largely to strip mines, rather than underground mines. That increase was indeed modest as compared with either the earlier rise in output or the total output of bituminous coal. The developments which made it possible, however, did result in a change in the structure of the coal industry. By 1944 the increased number of strip mines in operation were not only using more machinery and employing more men, but in addition they accounted for a larger proportion of the total output of bituminous coal than ever before, 16.3 per cent as compared with only 8.7 per cent in 1938.

The expansion in the production of bituminous coal during World War II, and the manner in which that expansion occurred provide a completely new basis for evaluating the bituminous coal legislation of the 1930's. The primary purpose of that legislation, it will be recalled, was the reduction of productive capacity, with no consideration of the strategic role of the bituminous coal industry during war or other periods of national emergency. In addition, and even more significant, are the important implications of the wartime experience for all those who are concerned with future developments affecting this vital industry.

COMMUNICATION

A BASIS FOR STUDYING THE SUPPLY OF ECONOMISTS

Three recent studies by the U. S. Office of Education[1] show that about 3 per cent of all doctorates, about 1¾ per cent of all master's degrees,[2] and about 3 per cent of all bachelor's degrees awarded during the period 1947–50 were in economics. The absolute figures for 1949–50 were 14,573 bachelor's degrees, 921 master's degrees, and 200 doctorates.

The greatest number of doctorates was awarded by the Harvard-Radcliffe department; it awarded 112 during the 3-year period. This far surpassed the nearest competitors, such as Wisconsin (46), Chicago (33), Columbia (22), Illinois (21), and M.I.T. (16). With the exception of these six, few universities awarded more than 4 doctorates in any given year. About eleven times as many men as women received doctorates in 1947–50, and in 1949–50 the proportion was 21 to 1.[3]

Columbia, Harvard-Radcliffe, Michigan, New York University, Pennsylvania, and Wisconsin award the largest number of master's degrees in economics. American, California, Catholic University, Illinois, Iowa, Iowa State, Minnesota, New School for Social Research, Ohio, Pittsburgh, St. Louis, Texas, and Washington all awarded more than 30 master's degrees during the 3-year period.

Figures on the master's degree make most evident the difficulty which exists at all three levels of distinguishing between a degree in business and commerce and a degree in economics. The number of master's degrees in business and commerce is substantially more than four times the number in economics itself. In 1949–50, 4,335 master's degrees were reported in business and commerce as compared with 921 in economics, and the proportion was about the same in 1948–49. Business and commerce was one field in which enrollment was particularly affected by returning veterans. Master's degrees awarded in the field were only 2,314 in 1947–48 as compared with the 4,335 of 1949–50. This also helps to explain the considerable discrepancy between men and women in the field. In 1949–50, 4,006 men and only 329 women were granted master's degrees in business and commerce.

The main issue here for those trying to analyze the supply of economists

[1] Robert C. Story, *Earned Degrees Conferred by Higher Educational Institutions, 1947–48* (Federal Security Agency, Office of Education, Circular No. 247, Nov. 1948); *Earned Degrees Conferred by Higher Educational Institutions, 1948–49* (Federal Security Agency, Office of Education, Circular No. 262, Nov. 1949); *Earned Degrees Conferred by Higher Educational Institutions, 1949–50* (Federal Security Agency, Office of Education, Circular No. 282, Dec. 1950).

[2] Each of these statements should be qualified by reference to the discussion below of the difficulty of distinguishing between a degree in economics and a degree in business and commerce.

[3] The effect of the war and of the GI Bill during this period was to increase the proportion of men to women in nearly all fields for the period under consideration.

is this: What proportion of the master's degree candidates in business and commerce actually or potentially prepare themselves for careers in economics? A group of economists discussing a related problem said: "We have not attempted a precise distinction between economics and business as subjects for study. The two fields merge at so many points that any sharp division would be arbitrary and artificial. In this connection, course titles and administrative jurisdictions are singularly misleading. Many, perhaps most, courses offered in schools of business and in economics departments combine elements of both economics and business. . . . Many business courses, as actually taught, contain substantial amounts of economics."[4] For example, consider the master's program in economic analysis at the Columbia University Graduate School of Business.[5] It includes economic analysis, economic statistics, courses on the structure of the American economy, regulation of public utilities, business economics, analysis of business conditions, and productivity, production, and prices. Recommended courses include such titles as business cycles. There would be more doubt as to whether the Columbia Business School programs in advertising management[6] and in insurance[7] *per se* prepare students for careers in economics. And there are business schools which emphasize the technical features of such subjects as accounting, insurance, and taxation. In these instances, students are presumably not prepared as economists.

The total number of doctor's degrees in business and commerce awarded during the 3-year period was 128; 30 of these were awarded by New York University. In most business schools, the requirements for the doctor's degree demand more economic analysis than does the master's curriculum, and it is probably reasonable to regard all doctorates in business as, at least potentially, contributing to the supply of economists.

There are no operable criteria by which one can determine how many of the undergraduate majors in a field do or could contribute to the supply of specialists in that area. And we have no relevant studies as to what social science majors do when they graduate.[8] For some purposes, competent undergraduates may be in practice as well or better prepared than mediocre holders of the master's degree.[9] It is therefore worth noting that in 1949–50, 72,137 bachelor's degrees in business and commerce were awarded, constituting $\frac{1}{6}$ of all the undergraduate degrees conferred in the United States.[10]

This figure poses an exceptionally important problem for those interested in the contribution of economics to liberal education. For, in fact, the undergraduate business courses are often taught by persons whose own graduate training has been in economics. What can and should they do to contribute to

[4] Howard R. Bowen, *et al.*, "The Study of Economics in Schools of Business," *American Economic Review*, Supplement, XL: 107–8 (Dec. 1950).

[5] *Announcements for the Winter and Spring Sessions, 1950–51*, pp. 42–5.

[6] *Ibid.*, pp. 33–4.

[7] *Ibid.*, pp. 54–5.

[8] For discussion of this issue, see *Goals for Political Science*, pp. 110–12.

[9] *Ibid.*, pp. 110–12.

[10] This compared with 38,371 degrees in the field awarded in 1947–48.

the liberal and to the professional education of those whom they teach? There is no reason to suppose that this issue is customarily stressed or even mentioned in the graduate economics curriculum.[11] But consider these propositions: Principles of economics is ordinarily required as an introductory course both of economics majors[12] and of business school majors.[13] "Usually no distinction is made between business and non-business students, the same course serving both groups."[14] Since there are at least five times as many majors in business as in economics, the probabilities are substantial that the average graduate student in economics who goes into college teaching will deal with a much greater number of actual or potential business majors in his introductory course than of economics majors.[15] Nevertheless, it is widely believed that there is a strong tendency for teachers of an introductory course in any field to orient it towards potential majors in their own field rather than towards those not likely to continue further in the discipline.

Since the reports upon which the earned degrees circulars are based rely upon reports from registrars, and since in some instances universities and colleges do not themselves distinguish sharply between degrees in economics and degrees in business, some discrepancies necessarily arise. For example, one institution reported in 1947–48 that it awarded 175 master's degrees in economics and none in business and commerce, while in 1948–49 it reported 244 master's in business and commerce and none in economics. In 1949–50, the report read 54 master's in economics, and 243 in businese and commerce. Such difficulties as these are sometimes due to differences in nomenclature and sometimes to the uncertainty on the part of registrars as to what title to give a particular department, especially joint departments. There are also various possibilities of omission and error.

Relatively little is known about the effective demand for persons majoring in the different social sciences. Few institutions of higher education make any systematic effort to keep a record of what happens to their alumni. It might be desirable for economists to undertake a systematic study of the supply and demand of specialists for future planning purposes,[16] particularly in order to try to determine what are the gaps in our present preparation of economists.

[11] A summary statement by Paul W. Ellis, "Graduate School Offerings in Economics," appeared in the *Journal of Higher Education*, May 1951, pp. 263–265.

[12] *Undergraduate Economics in Higher Educational Institutions* (Federal Security Agency, Office of Education, Circular No. 297, June 1951).

[13] Bowen, *op. cit.*, p. 108.

[14] *Ibid.*, p. 108.

[15] If we take the values of liberal education and education for citizenship (see *Goals for Political Science*, *op. cit.*, Chapter II, for a discussion of these values in an analogous field). It might also be pointed out that there are reasons for supposing that students predisposed *not* to be interested in a liberal education, insistent that education be practical, tend to major in business so their contact with academic economics may be one of the few occasions when they are exposed to a liberal arts "theoretical" subject to which they are not already inclined to be hostile, and hence the economics teacher has a unique opportunity.

[16] Such information as is available in the 1948 Directory of the American Economic Association, *American Economic Review*, Supplement, Jan. 1949, applies rather to current members of the association than to the total supply of economists, although probably the place to begin such a study of supply would be with the directory.

It is frequently argued, for example, that it would be desirable if more economists were trained in the relationship between the sociological theory of community structure, modern developments in philosophy of science, and economic behavior. It is evident enough too that the more economists there are with specific instruction in price theory, the more useful it would be in times of emergency to such agencies as Office of Price Stabilization. But this is not really the issue. The problem which confronts all the social sciences is one of allocating scarce resources. Granted a limited number of teachers and a limited amount of time for training students and a limited supply of facilities, which possibilities should be emphasized?

Washington, D. C. CLAUDE E. HAWLEY AND LEWIS A. DEXTER

BOOK REVIEWS

The Decline of Laissez Faire: 1879–1917. By Harold U. Faulkner. New York: Rinehart and Co., 1951. Pp. xiv, 433. $4.50.

"Raw facts are, as such, a meaningless jumble" wrote J. A. Schumpeter. In order to apprehend we must also understand. History, therefore, which lacks an adequate conceptual apparatus can never convey full understanding. We must not merely collect our "facts," we must also check our models.

The present volume seems to this reviewer a rather outstanding example of painstaking fact-gathering marred by flabby theory. When Mr. Faulkner tells us that the famous strike at Lawrence, Massachusetts was in 1912, I am willing to believe that that is correct. Or when he gives long excerpts from speeches of the period it is also reasonable to suppose that that is what was actually said or at any rate reported. Similarly the photographs are of course contemporary and genuine. Furthermore a compilation of dates, speeches, reports, and photographs is bound to be interesting. But I have read few volumes which contained a larger number of cocksure economic-statistical generalizations. For example, (p. 251) "Economists are agreed at least upon two points with regard to labor after 1897. First the real income of most wage earners increased but little during the twenty years after 1897. Second this income was inadequate to support decently the vast majority of wage earners." I am neither a statistician nor yet an historian (and therefore should not be reviewing this book). But I am willing to post a small bet that if we really started to analyze the data a good part of the postulated unanimity would disappear.

The truth of the matter is that though this book presents a great deal of interesting material and conveys the "feel" of the cultural scene rather well, it is in sum deplorably superficial. The economics, in particular, is incredibly archaic, consisting mostly of a hash of diluted Veblenism stirred in with spotty statistics, a little trade union propaganda and some uncritical trust busting. The appraisals are alike so vague and so muddled it is almost impossible to analyze them clearly.

But let us try to be a bit more specific as to the inadequacies of the school of thought which this book represents. First of all, like virtually all Neo-Veblenite works, the clash of progress and security, the pressure group problems, and the role of entrepreneurship are largely misunderstood. Krech and Crutchfield's *Social Psychology* would have been useful here. Secondly, the analysis of monopoly and competition is naive to a degree. On the one hand, the work of men like Professor Stigler who cast doubt upon the thesis of concentration is ignored. On the other, the economics alike of discrimination and of transportation is strikingly over-simplified.

The work of Adelman, John Maurice Clark, and Joel Dean, for example, has had virtually no influence upon the author. Similarly, Schumpeter's dynamic theory of monopoly has not registered at all. Finally, the thesis that the business cycle is almost wholly the result of planlessness and "finance capitalism" is practically never challenged. Those modern writers who trace the cycle back to

the "problem of pace" and show that much of it could occur under socialism, receive no hearing. Keynes and Hansen are totally omitted. One is left wondering just what difference it would have made, aside from a few statistics, had the present volume been prepared in 1924 and left in a vault until last spring.

University of Virginia DAVID MCCORD WRIGHT

What Happens During Business Cycles: A Progress Report. By Wesley C. Mitchell. New York: National Bureau of Economic Research, 1951. Pp. xxxii, 386. $5.00.

One's first impulse is to compare the posthumous *What Happens During Business Cycles* with Mitchell's masterpiece, the celebrated *Business Cycles* published in 1913.[1] A great mind is apt to be dissatisfied with its own best efforts. Not content with the factual foundation of *Business Cycles*, impressive as it was, Mitchell devoted a major share of his quarter century as Director of the National Bureau to trying to do the same job over again on a vast scale. *What Happens During Business Cycles* is the result.

But in truth there is a more striking parallel between the present book and Mitchell's *Gold, Prices and Wages.*[2] Both books are incomplete by design. Both represent reports on investigations that were interrupted, the first by other work, the last by the close of Mitchell's career. Both were intended to provide the statistical basis for an analysis Mitchell had to leave to others. Like the earlier book, *What Happens During Business Cycles* will be a rich source of information for years to come.

The present volume is even more incomplete than *Gold, Prices and Wages.* It reports on a research program the National Bureau will continue to prosecute, and Mitchell did not live to write the last four parts, which were intended to describe the expansion, recession, contraction and revival phases. Unfortunately Arthur F. Burns, who wrote the Introduction and long since succeeded Mitchell as Director of the National Bureau, did not complete the narrative on grounds that "the work of a major scientist, even if not half done, deserves a life of its own, unencumbered by the hand or voice of another" (p. vii). But surely to concede that what Mitchell thought worth doing while he lived is still worth doing (perhaps in a separate volume) no more violates Burn's dictum than the latter's decision to continue the ambitious research program Mitchell mapped out for the National Bureau.

We shall not attempt to summarize Mitchell's findings. The principal ones are familiar enough; the value of the book lies in the wealth of detail, particularly in Chapter 10 and Charts 1 and 7. Let us turn rather to the controversial subject of methodology.

Mitchell stated his purpose succinctly: "If the aim of economic theory is to attain understanding of economic experience, any valid summary of the cyclical consensus [of time series] is a basic contribution to the theory of business cycles"

[1] Berkeley: University of California Press.

[2] *Gold, Prices and Wages Under the Greenback Standard.* Berkeley: University of California Press, 1908.

(p. 253). He also said, "Seldom does a theorist feel impelled to hunt for the exceptions to his rules and inquire how they come about. Of course a statistician may rest content with what his averages tell. But in the statistical approach deviations from averages constitute a standing challenge to scientific curiosity, inciting further explorations, which may lead to the discovery of unsuspected regularities among what had seemed annoying exceptions to orderly relations. Presently the newly discovered regularities may be incorporated into the older generalizations; this more adequate formulation stimulates fresh inquiries into the discrepancies that still appear between 'theory' and 'fact,' and the spiral of research mounts to a higher level" (pp. 227–8).

Thus for Mitchell theory meant a generalization of facts as well as an explanation of them. Not for him the simplifying assumptions that are useful tools for theorists precisely because they are unrealistic. No one can doubt the fruitfulness of Mitchell's outlook in his own work, but it led him and Burns, here and elsewhere, to cast slurs on pure theorists. This is in bad taste, inasmuch as the National Bureau (though for sound reasons) has been reluctant to tackle the factual questions abstract theorists want answered. Instead of urging them to be more like the National Bureau, we should realize that those who have a comparative advantage in pure theory would do economics no good if they turned to gathering statistics.

But if the National Bureau has not always fully appreciated a rival approach, it has been more sinned against than sinning. Its critics have never quite understood the value of probing for "unsuspected regularities." Granted that we want abstract theory, econometric structures, and hypothesis-testing, we also need empirical research based on as few preconceptions as possible. The criticism that other approaches are more promising is irrelevant except for allocation of research funds *at the margin*.

This reviewer's doubts about the research mapped out by Mitchell and Burns are of a different kind. Ultimately someone is expected to digest the Bureau's myriad of statistics and come up with a theory of the cycle. It was Mitchell's genius for this kind of analysis, quite as much as his zeal and high standards in collecting facts and figures, that made *Business Cycles* an outstanding performance. With Mitchell gone, who will do this crucial job? True, we can reasonably expect economics to attract a fair share of the world's geniuses. We have at least three or four right now. But the job we are talking about requires a particular kind of genius—Mitchell's kind. Economics has had quite a few whose genius was for abstract and mathematical analysis, but from what this reviewer knows of the history of economics, Mitchell's was unique. Even in his case it flowered only once. The weakness of the National Bureau's approach is that it was built around the talents of one man.

Some might take this as reason for doubting the wisdom of the National Bureau's ever having embarked on their approach. This reviewer, feeling that Mitchell's kind is not unknown in other fields of research, prefers to hope for another Mitchell.

Vanderbilt University RENDIGS FELS

Economics of Employment. By Abba Lerner. New York: McGraw-Hill Book Co., 1951. Pp. xv, 397. $4.00.

This book is another addition to the Economic Handbook Series edited by Seymour E. Harris. In this elementary account of Keynesian economics Professor Lerner discusses the factors that affect employment in language so simple that any person of average intelligence can understand what he is talking about. In a special effort not to confuse readers who might be troubled by graphic presentation the author has "imprisoned" the geometrical figures and diagrams in the appendixes of the various chapters.

Part I introduces the problems to be discussed and Part II is devoted to the building of the framework of the theory of emplyoment. Once this is accomplished to his complete satisfaction, Professor Lerner offers "Functional Finance" as the only sound and workable method for turning our upside-down economy rightside-up. Under Functional Finance the government would provide the steering wheel whereby our economy would be guided in such a manner that it would not run into depressions or climb to the heights of inflation. When depression threatened, the government would encourage increased spending by an increase in government purchases, by encouraging individuals to spend more, and by going into the market as a lender of money or by paying its debts with new money or both. When prosperity reached the point where inflation threatened, the government would take steps to reduce spending by decreasing its own spending, by inducing individuals to spend less through a decrease in pension payments, social-security payments, by increased taxes, and by borrowing money in the loan market.

Once his plan is explained, the author devotes the remainder of the book to a discussion of all the "resistances" which might be expected to upset his Functional Finance arrangement. He admits that there would be many difficulties to overcome, the greatest of which would be ignorance of the workings of Functional Finance. The real purpose of the book is to try to educate the people to the advantages of Functional Finance as a means of maintaining full employment and permanent prosperity.

Professor Lerner's plan really contains little that is new. In fact, there seems to be substantial agreement among economists as to which economic policies should be applied when aggregate demand becomes temporarily deficient or excessive in an economy such as ours. The area of disagreement becomes much broader when it comes to a consideration of the long-run implications of such short-run policies. It would have been more profitable had Professor Lerner devoted his splendid mind to a discussion of the more controversial aspects of the long-run problems of Functional Finance rather than to a simplified exposition of pllicies upon which there is substantial agreement among competent authorities.

Of course the author's efforts are not in vain. He has certainly rendered a substantial service by his lucid treatment of some of the most difficult parts of Keynesian economics. For instance, his treatment of the components of income, consumption, and investments and their relationships; the determinants of

income, especially the rate of interest, and the marginal efficiency of capital; and the international aspects of Keynesian economics is a distinct contribution in the field.

University of Virginia GEORGE T. STARNES

Economics and Public Utilities. By Eli Winston Clemens. New York: Appleton-Century-Crofts, 1950. Pp. ix, 765. $5.75.

This book is part of "The Century Studies in Economics" series, edited by William H. Kiekhofer. The author, who is Professor of Economics at the University of Maryland, has succeeded in presenting his analysis of public utilities, not as an isolated field of study, but as an indispensable and integral part of our entire economy.

The author uses many of the more recent economic theories as analytical tools. He presents numerous case studies in the fields of economics, political science, business, and social control which demonstrate both the practical applicability and the shortcomings of these theories.

The problems of pricing, financing, accounting, valuation, depreciation, and regulation are discussed in their relationship to public utility services. Some of the more important public utilities such as light, gas, water, and telephone are treated individually and in greater detail. The last four chapters deal with such publicly owned projects as T.V.A. and the Columbia River Project.

The need for close government supervision of an industry in which free competition is an economic impossibility is not questioned and, rather than to philosophize about the theoretical advantages of laissez-faire, Professor Clemens, realistically, states that "government regulation of business is now accepted as an integral part of our American system" (p. 66) and "as our economic society grows more complex, it seems inevitable that more and more individual rights will have to be surrendered to the common good" (p. 71).

Professor Clemens considers the interests of society at large as paramount: "It is a cardinal principle of regulation that the public interest and not the interest of the utilities must be considered controlling" (p. 93) and "if we are to predict the future of the public utility concept we can rest assured that the laws of property will not stand in the way of public necessity" (p. 36). But not too much is to be expected from the legislature as custodian of public policy either because "legislatures are . . . arenas where pressure groups push and logroll and jockey for political advantage" (p. 70).

While not advocating public ownership of public utilities in general, Professor Clemens, nevertheless, feels that "public ownership as an alternative should never be abandoned in any regulatory system" (p. 88). But he does not fail to warn of the difficulties with which proponents of public ownership will be faced. He points to the political machinery that will be set in motion, functioning through "Taxpayers' Committees" consisting of the "solid citizens" of the town. Funds available for the fight for "freedom of enterprise" can hardly be matched by public bodies, limited by appropriations, or by private individuals favoring public ownership. Points of law will be raised and delaying tactics will

be used to make the municipal purchase of privately owned public utilities extremely difficult.

With equal realism, Professor Clemens discusses the attitude of the courts, pointing to the judicial belief, prevailing in the past, that "the utility rather than the ratepayer was to be accorded court protection" (p. 356) until "the court itself was caught in the tide of the times that President Roosevelt so skillfully rode and directed" and "the law and economics of the booming 1920's gave way to the new and more sober concepts of the depression-ridden 1930's" (p. 148).

Economics and Public Utilities is as good a book on the subject as this reviewer has ever read. The interesting way in which the material is presented in the framework of our economic system, the up-to-date case studies, the pertinent yet not cumbersome tables and graphs will certainly make it a book which students and teachers alike will enjoy. It ought to be stressed, however, that some previous knowledge of economics is presupposed. Thus, for example, the author himself points out that "it is assumed that the reader is already familiar with the theory of market prices" (p. 364). Especially Chapter 11 on "The Theory of Public Utility Rate Making," going into a very detailed marginal cost analysis for both the long and the short run, discussing such issues as the economic justification of price discrimination in general, and in particular in the case of the multiple product firm, would cause difficulty for a reader not familiar with basic economic principles.

University of Alabama HARRY SHAFFER

Income and Wealth, Series I. By the International Association for Research in Income and Wealth. Edited by Erik Lundberg. Cambridge: Bowes and Bowes, 1951. Pp. xv, 297. 30 s.

Editor Lundberg has selected eight of the papers read at the first (1949) Conference of the International Association for Research in Income and Wealth. Contributors are Richard Stone, Gerhard Colm, Jan Marczewski, E. F. Jackson, G. Stuvel, Simon Kuznets, J. B. D. Derksen, and W. B. Reddaway. The first goes into considerable detail in discussing the entries in a system of social accounting and illustrates by reference to the British Official Estimates for 1948. The next four are concerned with experiences in the use of social accounting in their respective countries (United States, France, England, Netherlands). Professor Kuznets considers philosophical and more narrowly statistical problems involved in estimating the net product of government; and the last two contributors discuss methods of measuring intertemporal changes in real income.

Emphasis upon statistical procedure and upon possible uses of statistical estimates makes frequent duplication inevitable in a collection of this nature. The book will probably have its greatest appeal for specialists, who can study subtle differences in the treatment of various "fine points." Topics of interest for more general economists include the summaries of recent experiences, Colm's distinction between statistical projections of an "orientation" and an "imperative" character, and Kuznets' philosophical wrestlings. Colm points out that in

the United States most projections merely "establish benchmarks which serve for guidance in the formulation of private decisions or government programs," whereas in "fully regulated economies" they are "intended to be enforced by government action." Kuznets' remarks about the creative role of the state could, with very little difficulty, be transferred to a discussion of marginal productivity theory.

Indiana University HENRY M. OLIVER, JR.

Ausgleichsgesetze der amerikanischen Zahlungsbilanz. By Jürg Niehans. Bern: A. Francis AG. Verlag, 1951. Pp. x, 173. Paper, 9.50 S. Fr.

If a creditor nation like the United States is to receive payments of interest and dividends and eventually repayment of principal, it should be prepared to accept a larger volume of imports, otherwise debtor nations will default. As Europeans emphasize, their destiny is closely linked with the solution of the "dollar problem."

Going out from this assumption, it is the purpose of Niehans' study to find the principles which would cause general changes in the American balance of international payments, if non-American countries increase their exports to USA under the premise that their prices are 20 per cent below the prices of the American inland market. Investigated are American imports of eighteen different goods and the effect of American travels in European countries as well as the relationships between American export and import.

The solution of such a difficult problem requires the application of price-theoretical principles and tools which have been further developed by the author. He introduces a distinction of economic "Nah- und Fernwirkungen," immediate and distant effects caused by an unexpected increase of foreign import offers that will result in a change of buy and sell intentions within the American inland trade. He also subdivides the immediate effects into primary immediate effects upon the quantity and price of the purchased import goods themselves, and secondary immediate effects upon the disposition of other goods in the plans of individual importers for which there has been no change in the original expectations of an undisturbed market. The resulting change from the inland market to the import market will cause other entrepreneurs and households to change their purchasing plans, what the author calls Fernwirkungen—distant effects.

The first half of the book is filled with the application of these Nah- und Fernwirkungen in order to have a basic structure for his quantitative analysis of the various disturbances of the equilibrium of balance.

To give a capsule survey, the first chapter deals with the essence of the equilibrative phenomena, the second, with price-theoretical standards and the third chapter, with symptomatic abstractions as bridges between theory and statistics, seen under his doctrine of Nah- und Fernwirkungen. The fourth, fifth and sixth chapters are devoted to the Nah- und Fernwirkungen of equilibrative disturbances. Niehans makes the attempt to find practical standards for each price-theoretical change, basing his price theory on different elasticities, such as elasticity of expectation, of import demand and supply, of income and others.

The author's final conclusions in the field of political economy are right, if we grant his assumptions. But sometimes his assumptions are somewhat unrealistic and thus, in spite of his truly scientific approach, the practicality of his thesis becomes limited, especially when he tries to apply price-theoretical standards which are based upon intentions, expectations and unrealized deals, simply because these data are not generally available. However, the author is aware of this. Even if individual enterprisers or households could be interviewed about their intentions, their expressed intentions would not have to be identical with their future actions. And statistical interpretations of actual business deals will rarely indicate cause or effect of a certain economic change because statistical calculation is only valid if each element is obeying solely the laws of chance based upon the calculus of probability.

It is the aim of science not just to understand but to predict. Niehans' generally brilliantly formulated theories and methods of analysis prove again that economic precepts are not universally valid, but are relative to time and place. One of the tragedies of our time seems to be that wartime regulations become a permanent part of the international scene. The economic relations between the United States and its allies are now dominated by problems of rearmament. This means that the old problems of monetary and trade policy must be reconsidered in the framework of the rearmament crisis, which makes economic collaboration independent upon price theories, not to mention the web of customs barriers interlaced with bilateral agreements, multilateral cartels and local shortages, divided by an American and Soviet sphere of interests.

It will be difficult to contradict the seven logical conclusions at which the author arrives in his book about the restitution of the equilibrium of the American balance of payment. However, the main issue and the alternatives of action in view of our balance of payment are influenced by the availability and allocation of essential materials, by restricted trade with the Soviet orbit, and by the difficulty of obtaining sterling convertibility.

Thus, Niehans' contribution to the problem of adjusting the American balance of payments in the direction of an integrated world economy, resting on a comparative price mechanism, remains mainly of value in the theoretical field.

Georgia Institute of Technology ROBERT SCHARF

Cyclical Movements in the Balance of Payments. By T. C. Chang. New York: Cambridge University Press, 1951. Pp. ix, 223. $3.75.

This new book by T. C. Chang is a "statistical survey of the balance of payments data of different types of countries in the period of 1924–1938." This is much more indicative of the contents of the book than the title. The first part is devoted to a general analysis of the interrelationship for the period under discussion between such broad aggregates as imports, exports, prices, national income, and world demand. It consists of five chapters: "Equilibrium in the Balance of Payments," "International Comparison of Demand for Imports," "World Demand for Exports" (two chapters), "Fluctuations in Exports and National Income." The second part (two chapters) is concerned with an analysis

of the British balance of payments. More than half of these first two parts are revised editions of earlier journal articles by T. C. Chang. In the last part he selects representative examples for five types of countries—the United Kingdom having represented a sixth type—for an analysis of their balance of payments: The United States as a country "highly industrialized and self-sufficient in most natural products," Sweden as an illustration of a country "less industrialized . . . with a relatively high degree of self-sufficiency in foodstuffs," Australia as an agricultural country, Chile as a mining country, and Canada as a mixed economy. It is surprising that barely four pages are devoted to the United States when both Australia and Canada receive about 20 pages each.

As the reader would expect, the treatment, in general, is in the form of multiple and partial correlation analysis. This, of course, is a continuation of Chang's earlier work. As such it suffers from the weakness inherent in that approach. The validity of conclusions so reached, such as with respect to the price elasticity —or in many cases the inelasticity—of the demand for exports and imports has been too fully discussed in the recent literature to need further elucidation here (e.g., Orcutt's article in the May 1950 issue of the *Review of Economics and Statistics*). The author's manipulation of data, although no details are given, is not above criticism. At times trend is eliminated (e.g., p. 58), at times it is not; substitution of a time series for one not available has to be resorted to; in only a very few cases are time lags introduced, etc. All of this is dangerous business. The effect of quantitative controls and administrative restrictions which became so important in the 1930's almost completely eludes this type of treatment. This is equally true of political influences. These extensive calculations lead the author to some general conclusions which, on the whole, confirm the results of earlier analyses. While many of them may not be new, their confirmation as well as their presentation in a unified pattern and comparison are interesting.

Despite the above criticisms—and it is the duty of the reviewer to be critical—the book is well worth reading. The all too limited theoretical analysis and the statistical treatment are suggestive in many ways.

Washington University HENRY H. SCHLOSS

Econometrics. By J. Tinbergen. Translated by H. Rijkin van Olst. Edited by Harold M. Somers. Philadelphia: Blakiston Co., 1951. Pp. xii, 258. $4.50.

In the geography of Academia, Econometrics is a small territory bounded by the extensive regions of Economics, Statistics and Mathematics. While it cannot be said that Econometrics has ever been successfully invaded by Economics, a state of cold war has traditionally existed between these neighbors. This tension is attributable in large part to the belief, held by the people of Economics, that Econometrics is a satellite of Statistics and Mathematics. Indeed there is a widespread idea that Econometrics was in some subversive way carved from ground formerly held by Economics; the people of Econometrics, on the other hand, insist their territory is reclaimed land not formerly held or worked by anyone. In an attempt to break this stalemate, Professor Tinbergen has sent a

peace feeler to Economics; it is the purpose of this review to assess this peace feeler.

As an attempt to acquaint economists with the actual methods and aims of econometrics, this work achieves a considerable success. A knowledge of economics, but no knowledge of mathematics beyond the high school level, is needed by the reader according to the editor. To orient the reader a discussion of mathematical economics is undertaken. As a review of mathematical economic theory this segment of the book is very weak, but it does cover the essentials needed in the econometric models used later. These essentials include demand and supply equations, turnover and price-fixation equations, and simultaneous economic systems.

The second major portion of the book describes statistical testing of economic theories or models. The necessary background of statistical method is sketched; this background includes central tendency, dispersion, time series, simple and multiple correlation and regression analysis. The very brief statistical section does not measure up to the section on mathematical economics largely because there is no body of literary statistics to back up this material as literary economics backed up the earlier section. The statistical methods are merely described, and very few formulae are presented. So much is left unsaid it seems doubtful that this section would be comprehensible to one innocent of statistics.

The third section of the volume deals with the results of econometric research, these being classified as psychic reactions, technical relations, the reactions of business life, and the functioning of economic systems. Under psychic reactions, Engel curves, Keynesian apparatus such as the propensity to consume and the multiplier, statistical demand functions, and indifference functions are ably discussed. The discussion of technical relations is concerned chiefly with cost curves and production functions of the Cobb-Douglas type. Under reactions of business life are included supply functions, the demand for investment goods and "reaction relations in the financial sphere". The functioning of economic systems includes the echo principle, the cobweb theorem, and lagged business cycle movements. The entire third section is very well done and contains citations of important literature including foreign literature.

The final segment of the book treats econometrics and economic policy. The method is to construct a simple decision model for examination of the feasibility of alternative policies for closing the Netherlands' deficit on balance of payments in 1949. By use of this model Tinbergen demonstrates that neither price nor wage policy alone is sufficient to close the gap; devaluation is the only feasible policy. The construction and use of this model is the most impressive part of the book. Tinbergen shows very forcefully how econometrics is used in policy matters and why mathematical reasoning and quantitative methods are necessary.

A lengthy appendix consisting of reprints of three of the author's journal papers is attached. The first of these is an article on correlation in economic research that duplicates the volume's section on correlation without adding much explanatory material. The second article is an attempt at statistical verification of the accelerator. The last article is an ingenious discussion of long-term and short-term foreign trade elasticities.

What is the purpose of this book? As a peace feeler toward economists it should be successful, but the avowed purpose of the book is to serve as a textbook in econometrics. If this means a textbook for a survey at the lower graduate level designed to give the student the minimum knowledge of the field necessary for an economist specializing in other fields, the book serves its purpose very well. It would not be useful in a course intended for students specializing in econometrics. The Dutch version was used as a textbook; it would be interesting to know the type of course in which it was used.

The book is remarkable in that the foundations and usefulness of econometrics are depicted without recourse to any but the simplest mathematics. While it is impossible from a reading of the book to determine the division of labor, the author, the translator, H. Rijken van Olst, and the American editor, Harold M. Somers, all deserve praise.

University of North Carolina RALPH W. PFOUTS

Rates of Return—Class I Line-Haul Railways of the United States, 1921–1948. By Sidney L. Miller and others. Pittsburgh, Pa.: University of Pittsburgh Press, 1950. Pp. xiv, 211. $1.50.

This study was assumed by the University of Pittsburgh in 1947 at the behest of the Eastern Railroad Presidents Conference without restrictions or limitations being imposed by the sponsoring organization. The purpose of the study is to show the rates of return earned, 1921–1948, by Class I railroads in the United States, both for the United States as a whole and for major districts, and to judge the adequacy of the rates of return thus found.

The authors have set up their own estimates of a fair rate base and have computed the rates of return based on this rate base. They have also used the rate base as determined by the Interstate Commerce Commission at individual periods during the period 1921–1948, and have computed the rate of return based on the Commission's figures. Whether using their own figures, which include an allowance for working capital, or the Commission's figures their conclusions are that the rates of return have been clearly abnormally low for the railroads year by year. Using their figures the average rate of return for the 28 years was only 3.69 per cent. Only during the war years and in several years during the 1920's was a reasonable return approached or exceeded. The study by major districts shows that all major districts with the exception of the Pocahontas Region, have received less than a fair rate of return for practically every year studied. They conclude that definite relief must be given to the railroads as a group if we are to have a sound transportation system in existence to meet any future emergency. They offer as one startling fact that there has been no new investment of equity capital (except for reinvestment of earnings) during this whole period. The greatest source of new funds during the whole period has been in the form of equipment obligations. They also conclude that no industry can long survive when private venture capital feels that there is no inducement to invest in the industry and that there is a very real danger of the industry being nationalized in the future if this condition persists.

The study has a large number of very splendidly constructed tables and graphs,

including complete figures year by year for each region, per cent of railroads paying dividends, trends in dividend rates, per cent of railroad mileage in receivership, duration of receiverships, and losses suffered in reorganizations. This book should prove to be a valuable source book for statistical information dealing with the whole problem of railroad earnings.

University of Florida R. W. BRADBURY

The Corporation Income Tax. By Richard Goode. New York: John Wiley & Sons, 1951. Pp. xiii, 242. $3.00.

Here is an economic analysis of the federal corporation income tax in the United States. The intent of the author is to emphasize the effects of the corporation income tax on national income and employment, and to test its consistency with the main objectives of fiscal policy. These objectives are considered to be: "... a reasonable degree of equality of income, wealth, and economic power; full employment; and high real income. Economic stability may be regarded as a fourth objective or may be considered desirable mainly because of its relation to the more fundamental objectives."

The study was substantially completed by 1949, with some revisions and later materials being inserted in late 1950. It is no mere expansion of his *Postwar Corporate Tax Structure* issued by the Treasury Department in 1946, as the first of its series of Treasury Tax Studies.

The first three chapters indicate the broad outline of economic problems presented by the corporation income tax, describe the modern corporation as a legal and economic entity, and consider whether corporations should be taxed as corporations. Support for a corporation income tax is found to come from: (1) the benefit or privilege theory; (2) use of the tax as a means of improving allocation of social costs; (3) the ability-to-pay principle; and (4) use of the tax as a means of social control.

Five succeeding chapters analyze the effects of the tax on prices and wage rates, distribution of income and wealth, savings and consumption, investment, and national income and employment. Problems of measuring taxable profits are discussed in terms of Lifo and Fifo inventory valuation procedures, conventional and accelerated depreciation allowances, and interest and rental payments as deductions from taxable income. Alternatives for full and partial integration of corporation and personal income taxation are described and criticized. The final chapter is devoted to a consideration of the proper place of the corporation income tax in the revenue system, and to stating the conclusions of the study.

For those interested in the statistical methods used in estimating the tax impact on savings and consumption, twenty pages of appendices are provided.

"No important modification of the corporation income tax seems to be urgently required." However, further extension of the offset period for losses is desirable whenever feasible, to minimize effects of high rates on investment. Accelerated depreciation would stimulate investment more than would lower rates or integration with the personal income tax, but this involves tax reduction. Hence, if adopted while revenue needs are heavy, rates might be raised at the same time to compensate for the reduced yield. The various integration proposals

rate only a low priority in tax reform. The double taxation charge usually leveled at the corporation income tax is found to be based on an oversimplified view of the modern corporation, overlooking the substantial differences between the small private corporation and the large public corporation. He concludes that the corporation income tax is our second best tax, first place being held by the personal income tax.

Chapter after chapter shows a closely reasoned progress through the analysis of the economic effects of the corporation income tax. The erroneous relationship between marginal revenue product and wage rate mentioned on page 63 (the only significant error found in a careful reading of the entire text) should hardly be considered, since a later paragraph indicates the correct relationship (page 65). An extensive knowledge of both Neo-classical and Keynesian economics is exhibited throughout the book, as it applies to the economics of taxation. Numerous references to the literature will guide the reader who wishes to pursue controversial points or to check the data for himself.

Probably some will be unable to accept all of the conclusions reached, for some will be unable to accept the stated goals of fiscal policy. Some will evaluate differently the various alternatives to the use of the corporation income tax. But no one interested in present day federal revenue problems can afford to ignore this book.

University of Florida LE ROY L. QUALLS

Financial Institutions. By Roland I. Robinson. Edited by Erwin W. Boehmler. Homewood Ill.: Richard D. Irwin, 1951. Pp. xxii, 650. $5.50.

This book is of special interest to instructors in finance because of the growing interest in this field as a separate course in the finance curriculum. This book represents a milestone in rounding out and crystalizing the material in institutions and should make it easier for more of us now to introduce the course. As pointed out by the authors, the book was written with a view to fitting it into the curriculum of the Department of Finance of Northwestern University, which may mean that it would have to be expanded at certain points and curtailed at others in order to meet the special needs of individual institutions. In the reviewer's opinion the writers used the proper approach to this problem by broadening the scope of the book as they did to present a brief sketch of the entire field of financial institutions.

The work is divided into four parts. Part II deals with "nonmonetary" financial institutions and comprises over 400 pages which cover chapters on credit instruments, commercial banking, specialized institutions such as commercial finance companies and factors, institutions offering consumer credit, investment banking, securities dealers and brokers, life insurance companies, and investment companies and investment counseling institutions, institutions engaging in urban real estate finance, veteran loan agencies and farm credit institutions. Part III discusses "monetary" as distinguished from "nonmonetary" institutions and includes chapters on money, deposit expansion, business fluctuations affecting financial institutions, the Federal Reserve System, government revenue, national debt and expenditures.

Part IV contains one chapter on the subject of financial institutions operating in international finance and includes a discussion of exchange rates, central bank regulation of foreign exchange and international cooperation through the Bank for International Settlements, The Tripartite Agreement and the Bretton Woods Agreement. Obviously, a survey of this breadth would necessarily be quite sketchy at certain points. The general pattern followed in the chapters is to present the general economic setting of the institution, the administrative structure of the institution, the source and application funds and legislation affecting the institution. One of the most interesting and helpful chapters, in my opinion, is Chapter 14 on "Trustee Services." In corporation finance the student meets the trustee in collateral trust financing, railroad equipment financing and in the secured and unsecured indentures, but his concept of the trustee as a special institution is usually quite hazy.

We could perhaps criticize the book at several points because of the lack of thoroughness, but to cover each one of these topics exhaustively would have required several volumes. The main alternative that I see to the broad survey approach used by these authors is to eliminate certain material on money and banking institutions which I feel are adequately covered in other courses. Certain other institutions such as investment banks, security dealers, and brokers are covered in corporation finance and investments courses, also, but repetition here is not a serious offence since the discussion does not occupy a disproportionate amount of the text as money and banking institutions do. It would seem that a de-emphasis upon money and banking and an emphasis upon non-banking institutions would accomplish much without increasing the over-all length of the book. I would like to see more emphasis placed upon commercial finance companies, factors and sales finance companies. Besides the noteworthy work by Walter S. Seidman titled *Finance Companies and Factors* and Vol. 13 of *Law and Contemporary Problems*, 1948, the National Conference of Commercial Receivables Companies, Inc., publishes the *Information Bulletin* on the technical aspects of the industry. Recognition of the importance of this area of finance is evidenced by the offering in several of our universities of special courses on receivables financing.

University of Mississippi LOUIS K. BRANDT

Government and Collective Bargaining. By Fred Witney. Philadelphia, Pa.: Lippincott Co., 1951. Pp. vi, 738. $6.00.

This is a comprehensive treatment of the part played by the government in the history and functioning of collective bargaining. The work is divided into seven parts, containing from one to six chapters each.

Part I, made up of but one chapter, deals with the nature and development of collective bargaining. This includes the conventional material on the growth of industrialism and of big business as stimulants to the formation of unions. The psychological, sociological, and political mainsprings of unionism are also sketched. However, the main point fixed by the author is that the laws governing industrial relations largely determine the position and course of collective bargaining in the nation.

Supporting this general position, Part II contains a chapter on labor unions when they were regarded as unlawful combinations, another on the labor injunction, and a third on the antitrust laws and collective bargaining. The main point is that the conspiracy doctrine before Commonwealth *v.* Hunt, the use of injunctions after that, and the subjection of unions to the antitrust laws retarded the growth of the American labor movement.

Part III is a review in six chapters of the program which began in the depths of the depression and ended at the height of postwar prosperity of encouraging the growth and development of collective bargaining. The main pillars of this program were the control of the labor injunction by the Norris-LaGuardia Act, the relief from antitrust prosecution by judicial interpretation, and the Wagner Act and its administration by the National Labor Relations Board.

Part IV deals with those provisions of the Taft-Hartley Act which can be subsumed under the broad topic of restrictions on collective bargaining. This is the dominant generalization under which the author discusses in six different chapters the content of collective bargaining, the control of the bargaining unit, union security, union revenue, workers' security programs, and the enforcement of the collective bargaining agreement. The criticism running through these chapters can only lead to the conclusion that the course initiated by the Taft-Hartley Act must be reversed, if collective bargaining is to be extended and promoted. However, these chapters abound with other suggestions and recommendations which would not result in returning to the "free collective bargaining" of the Wagner Act but would lead to other controls of collective bargaining than provided in the Taft-Hartley Act.

Part V contains six chapters which deal with the Taft-Hartley Act as it affects areas of industrial conflict, including restrictions on the strike weapon, picketing, boycotts, jurisdictional disputes, organization and political expenditures. This part and the foregoing make up a formidable condemnation of the Taft-Hartley Act in practically every detail.

Part VI reviews the experience with wartime controls of collective bargaining. While more sketchy than the five previous parts, it is another illustration of the economic and social necessities which have brought about a pattern in the control of collective bargaining in wartime or whenever a large part of the economy is diverted to war production.

Part VII, entitled Conclusions, consists of a brief chapter on collective bargaining and full employment and another one on the evolution and problems of labor relations law. The first of these chapters is not particularly germane to the question of government and collective bargaining, except that collective bargaining under full employment can easily become inflationary and lead to still further government controls of collective bargaining. The concluding chapter is at once a brief outline of the book and a hard-hitting attack on the Taft-Hartley Act as retarding both the development of unionism and the processes of collective bargaining.

Nine appendices contain the legislation discussed in the text, the so-called Mohawk Valley Formula and questions for study and discussion.

As a textbook, Witney's work contains some strong features. As labor law for

the layman, the early chapters are lucid and sufficiently detailed to give the student a firm grasp of the evolution of unions and union activity. The treatment of the matter of injunctions and the antitrust laws and collective bargaining is effective and convincing. The author writes with enthusiasm about the freeing of collective bargaining from judicial and legislative restraint.

The Wagner Act is regarded as the apogee of this development and the Taft-Hartley Act as a massive backward step. The author only faintly recognizes the mounting criticism of the operation of the Wagner Act and interprets it exclusively as hostility to the growth of unionism. He is satisfied that since the Wagner Act did not deal with such matters as refusal to bargain, unnecessary and too frequent strikes, abuses of secondary boycotts and jurisdictional disputes, coercive tactics with respect to picketing and the closed shop, union discrimination and laxity in the administration of union funds, it should not have been "blamed" for any of these developments.

It cannot be denied that large segments of the public, untrained in the logistics of legislation, wanted these abuses brought under some measure of control. The restrictive state laws and Congressional action on the Case bill clearly showed that such was the case. Even before Pearl Harbor the House had passed the restrictive Smith bill to regulate the behavior of trade unions. Whether such additional legislation would take the form of amendments to the Wagner Act or as additional labor legislation was a purely academic question, or at best a question of expediency.

It is exceedingly difficult, if not impossible, to deal with these problems by legislation without interfering with "free collective bargaining," which means "laissez-faire" in collective bargaining. Many would say that a number of the author's proposals, dispersed throughout the book, would also constitute restrictions on collective bargaining.

While the book deals principally with government policy regarding collective bargaining and the analysis of laws and their effects, there are random discussions of economic problems in the area of wages and prices. These are not handled with equal facility and expertness. For instance, without attempting to analyze or establish the proposition, it is assumed in several places that unions seriously affect the distribution of the national income. The leading economists who grappled with this problem in *The Impact of the Union* came to no such easy conclusion. Perhaps the subject of this textbook does not require careful analysis of economic conclusions. However, the author seems to have some fondness for this type of analysis because he returns to it in one of the concluding chapters which deals with full employment and collective bargaining. Here, however, he seems not to take seriously his own earlier assumption, for the whole chapter is based on another assumption that, if wages go up more than average productivity, prices must rise.

Library of Congress GUSTAV PECK
Washington, D. C.

Collective Bargaining: Principles and Practices. By C. Wilson Randle. New York: Houghton Mifflin Co., 1951. Pp. xii, 740. $6.00.

This is a description of collective bargaining as a "major facet" of the history of unionism. The contents of this text are subdivided under the headings: Introduction, Structure of Collective Bargaining, Issues, The Agreement, and Appendixes which include a glossary of labor terms, three wage agreements, one arbitration award, and a source list of labor information.

The author has indicated in the Preface that this text could be used more profitably by the student following course work in Labor Relations, Labor Problems or "perhaps Personnel Management." Accordingly, he has presented the "going concern" story of collective bargaining with a minimum of historical background and with practically no theoretical treatment of such major issues as wages and hours.

The approach is consistently realistic and the author has borrowed freely from the current contracts collected and analyzed by the U. S. Department of Labor. If space permitted, contract material could have been more meaningful if more "modal" clauses of contracts could have been inserted in the discussion on contract issues. The 49 pages contained in the chapters on the preparation for and conduct of collective bargaining contain the essence of sound negotiating procedure. The material in these chapters and in the chapters dealing with the bargaining issues is presented objectively and concisely and could well be used as a "background primer" for both union and management negotiators.

One might question the value of including four pages of the Consumers' Price Index (pp. 266–9). On the other hand, the author has appropriately incorporated facsimilies of NLRB forms as well as his own original diagrams illustrating bargaining structures and grievance procedures. Some users of the text might desire inclusion of the Labor-Management Act.

The style of the author is simple and readable. Students should welcome the practice of the author in consistently "leading off" with the topical sentence in each paragraph. "Collective Bargaining" has come into its own as a full fledged course. In the reviewer's opinion, this work quite satisfactorily meets the textual needs of such a course.

Alabama Polytechnic Institute CHARLES P. ANSON

Problems of Labor. By Glenn W. Miller. New York: Macmillan Co., 1951. Pp. xvi, 560. $5.00.

A seemingly endless stream of textbooks on various aspects of labor problems has appeared on the academic scene since the end of World War II. This book by Professor Miller is a worthy addition to this competitive field in that he has differentiated the product to some extent. Throughout the volume it is made apparent to the reader that the author believes that the logical and inevitable solution to most of the basic problems of the wage-earning class lies in government regulation.

The book contains 517 pages of well written and interesting text and three appendices—a bibliography, a labor-management contract, and the text of the Wagner Act as amended by the Taft-Hartley Bill—running the total length to 560 pages. It is divided into three parts. Part I deals with introductory material and definitions, the history of the labor movement, union structure, and the

viewpoints of employers, employees and the government toward labor problems. Insecurities are dealt with in Part II including the issues of unemployment, old age dependency, and sickness and accidents. In each instance the solutions advanced by unions, management, and the government are discussed. Part III treats of the economic issues involved in worker-employer relations, considering wages, hours, and the nature of collective bargaining. Finally, there is a summary chapter which examines the source of labor problems and the possibilities of solution.

The logical organization and clear style of the book facilitate understanding and make reading pleasant, although some deficiencies do appear. There is some repetition, for example, of the material on injunctions and arbitration. The discussion of wages is limited probably because the author feels that "all in all, the rate of wages is given overemphasis." A student necessarily will feel discouraged when he finds, after studying the material on wages, that "the field is wide open for argument." Granted that the theory of wage determination is in a state of flux, this does not mean that there are not some generally agreed upon principles, and it certainly does not necessarily mean that "if national well-being so demands, maxima may be set as well as minima."

More fundamental, however, is the decided "slant" given by the author to the discussion on solutions to various labor problems. He finds that the interests of labor unions and management are not identical and are frequently in sharp conflict, at least in the short-run. In accordance with his definition of liberalism as being "the willingness to accept change, experimentation, and government controls where deemed necessary, in an attempt to promote social welfare," Professor Miller makes clear that he favors government regulation of practically every type of labor problem. By statement or inference the solution to everything from nonindustrial sickness to wage determination is to be found, at least partially, in government control.

That is not to say that the author has not the right to express opinions or that the book is propagandist in nature, but rather that an intermediate-level textbook should objectively analyze and compare alternative solutions to problems confronting the wage-earning class instead of emphasizing one type of answer. In addition, the ramifications which would result from the entrance of government into new fields are not considered in as detailed a fashion as desirable. Not all of the opposition to the "welfare state" arises merely from the fact that it is a new field of action—a textbook should examine carefully the arguments pro and con, and, in any case, indicate the price of control by government.

Despite these criticisms the book has, as has been indicated, considerable merit as a text for mature students with some background in labor economics. The student will be exposed to a comprehensive, provocative analysis of the major issues confronting the wage-earning class and a wealth of discussion on methods of solving these problems.

University of South Carolina JAMES A. MORRIS

Labor and Industrial Relations: A General Analysis. By Richard A. Lester. New York: Macmillan Co., 1951. Pp. x, 413. $4.25.

This is not a revision of Professor Lester's 1941 text, *The Economics of Labor*, but a completely new book containing much less of the theory of labor economics and far more analysis of the problems of industrial relations. It is an excellent book and should make a good text for a beginning course in labor problems or form the basis for more advanced courses in industrial relations.

Professor Lester has included discussion of the basic problems usually found in labor problems textbooks, although his approach to these problems is novel. The reader, for example, will not find the encyclopedic collection of factual material found in many of the basic texts. Such data are usually out of date shortly after a book's publication, and students remember them only until the first hour test has been safely passed. Actually there are only two tables in the book.

Labor and Industrial Relations, in fact, should be a valuable book even after later editions have been published. Like Commons and Andrews' *Principles of Labor Legislation*, this text presents principles and problem analysis which should be sound even though factual details have changed. Furthermore, the author uses not only economic analysis but also calls upon the allied sciences in explaining industrial problems.

As may be surmised from the above, this reviewer believes that Lester's book is outstanding among labor problems texts because of the approach, the clarity of the analysis, and the discussions not usually found in such works. For example, the author constantly tells his readers that he is dealing with a complicated subject about which it is not always possible to give a simple explanation. "By being doctrinaire," he says at one point, "one can attain mathematical precision but the results, though subject to mathematical manipulation, contribute little toward an understanding of what actually happens. A plurality explanation may be indefinite, lacking elegance and refinement." "But," the author concludes, "it is better to be approximately and inexactly right than to be perfectly and precisely wrong" (p. 199). This realistic approach is found throughout the book.

Clarity of analysis is another mark of the book. All labor texts, for instance, contain factual description of labor union government. Too few explain clearly why unions operate the way they do and the importance of such operations. Lester clearly explains this and other problems.

Material not usually included in introductory labor problems textbooks which Lester included is another mark of distinction for this book. Lester describes some of the problems of research in the labor field; he has an excellent chapter on management in theory and practice; he discusses the question of labor as a monopoly; and he analyzes that much-discussed problem of collective bargaining and price inflation. This, of course, is but a partial list of the unusual subjects, but it does give some indication of the wide sweep of material covered by Lester.

Various readers, of course, will differ with Professor Lester both as to his analysis and conclusions. This reviewer, for example, thinks that the author knows businessmen well enough so that his tongue must have been in his cheek when he concludes because 100,000 labor-management agreements are signed annually that "the virtues of collective bargaining are widely realized" (p. 151). Some businessmen without "realizing the virtues" have simply accepted the

inevitable. Furthermore, the one-sidedness of the Taft-Hartley Act is not proved by the fact that "Employers can commit five unfair labor practices; unions are subject to double the number" (p. 328). Union leaders may disagree with the author's analysis of internal union management, whereas citizens who think legislation can cure all things will not like the author's conclusions that popular government of unions must be developed from within and not enforced by outside authority.

But these and other debatable points only serve to stimulate the reader. I repeat. It is an excellent book.

Duke University FRANK T. de VYVER

Personnel Handbook. Edited by John F. Mee. New York: Ronald Press Co., 1951. Pp. xl, 1167. $10.00.

When 22 outstanding personnel specialists write sections under the able editorship of John F. Mee, the result is an excellent handbook. An additional 43 consulting experts—executives, personnel directors, authorities in safety, training, and research, economists, and educators—likewise left their imprint on the work. Men like Frank T. de Vyver, Charles W. Lytle, Earl G. Planty, Carroll L. Shartle, and E. H. van Delden write in their fields of specialization.

The editor has successfully avoided the common handbook tendency of covering too many subjects too sketchily. Nor do the authors rely unduly on programs or illustrations drawn from industry. And finally the book cannot be stamped with the stigma of being largely a "technique" approach.

Indeed, on almost any major subject of personnel administration, the authors have sifted out essential, helpful, up-to-date information. It is a splendid reference book. This reviewer has found it useful for such specialized subjects as office wage administration, the place of committees in personnel relations, executive development, unguided interviewing, and principles of sound staff functioning.

A few minor points of adverse criticism include some overlap in subjects with the same sub-topics covered by two, and in one instance, three, of the authors. This can of course be defended to some degree. For example, a subject already mentioned, "committees," might conceivably appear as it does under "The Personnel Program," "Employee Communications," and "Industrial and Governmental Relations," but duplication takes place to some extent in the process. Sources are placed in the body of the text and are quite abbreviated, but citations can still be traced without too much difficulty. There is no bibliography, but such excellent work has been done in detailed, classified bibliographies on personnel by organizations such as the Bureau of Business Research at Ohio State University, by the Industrial Relations Section of Princeton, and in basic texts that the omission constitutes no great loss. Subjects within the area of work load and job assignment receive virtually no treatment. The answer may rest with the editor's views on what constittutes "personnel."

Here it is obviously impossible to cover the material in a 1,100 page handbook, but some features are worth mentioning. The authors discuss concepts of per-

sonnel administration, employee relations, communications, and training. Where we do have techniques such as merit rating, tests, job analysis, wage payment methods, employee surveys, and interviewing the authors in most cases critically evaluate different approaches.

Each of the 20 main sections has a well-indexed, detailed title page. For instance, the section on "Employment" has more than 50 sub-topics listed on the title page heading that section.

This handbook is indeed no "quickie" volume and bears out the publisher's contention that it contains considerable "how" as well as "what" information on subjects such as cost reduction, developing potentialities in employees, operating in a tight labor market, and reducing turnover.

University of North Carolina RICHARD P. CALHOON

Personal Finance. By John A. Leavitt and Carl O. Hanson. New York: McGraw-Hill Book Co., 1950. Pp. ix, 374. $3.50.

The author's aim is to present "... only that personal-finance information ... useful to everyone, regardless of interest or background." They seek to be selective rather than exhaustive in their choice of material minimizing the discussion of purely academic subject matter. In general, the book is clearly written in terms understandable to the layman. The point of view is that of the individual or family head who has an income which must be allocated among a wide variety of alternative uses—between present consumption of goods and services, future consumption (or current saving and investment), insurance against the many normal risks of the productive individual or family, and taxes.

Once the individual has decided how he will divide the expenditures among these major types of purposes, this book provides an excellent collection of concise factual information which will help him to choose the kind of good or service which is most desirable for a given purpose at the lowest cost. For each of the principal markets in which he may buy, the services available from the various selling agencies, and the specific facts and techniques necessary for "wise buying" are described with clarity and selective brevity making it a valuable handbook for the family bookshelf.

As a reference book, the chapters on saving and investment (Chs. 10–12) including that on home ownership (Ch. 16) and those on privately operated insurance sources (Chs. 13–14, 17) were outstanding.

While the content of the chapters on consumer credit is adequate, the arrangement detracts from their effectiveness in improving the buymanship of consumer credit by the individual. This treatment could have been enhanced by the integration of Chapter 3 (Charge Accounts and Installment) and the superior Chapter 9 (Borrowing Money for Personal Use). The treatment of "buying wisely" goods and services for current consumption is the least satisfying part of the book and unfortunately is found in the first chapters. It is superficial, misleading, negative, and unduly doctrinaire.

Chapter 2, unlike virtually all others, deals with how the individual or family may decide the various purposes for which the income will be spent and how

they can know to what extent their decisions are put into practice. While far from exhaustive in its content, the discussion of budgeting is essentially practical, concise, and provocative. It shares a weakness common to most discussions of family budgeting, namely, the absence of a plan of budgeting expenditures for durable consumer goods which provides competently for their replacement by the regular systematic amortization of their cost during the actual life of the good.

Teachers contemplating a practical but solid course in personal or family finance at the high school or college level might profitably consider this book as a basic text. The problems at the end of each chapter can help the individual student to apply his reading to practical personal problems and can form the basis for fruitful and systematic classroom discussion.

Fisk University JOHN HOPE II

Investment Analysis and Management. By Lester V. Plum and Joseph H. Humphrey, Jr. Homewood, Ill.: Richard D. Irwin, 1951. Pp. xiii, 664. $5.50.

In addition to the traditional material relative to the field of investments the authors add considerable valuable matter which arises from their experience as professionals. For the small investor they emphasize the necessity of a financial plan. A plan to include certain basic principles for the purpose of limiting risk and designed to meet specific investment objectives. The authors have provided the reader an honest and realistic presentation of the manner in which investment analysis and management are executed by the professional. The work covers the broad field starting with the development of a financial plan and the selection of individual securities by means of financial analysis and comparison, to devices for meeting the problems of timing the business cycle and stock prices. They present a balanced discussion of the role of common stock selection as means of providing a partial hedge against inflation. This work may be commended for combining the balance of textbook presentation of subject matter with the counsel of the experienced professional.

Alabama Polytechnic Institute GEORGE W. PATTON

Statistics for Economics and Business. By Donald W. Paden and E. F. Lindquist. New York: McGraw-Hill Book Co., 1951. Pp. ix, 276. $3.75.

In the words of the authors, "this text, plus the accompanying *Study Manual*, may be considered as constituting a *method of teaching* a first course in statistics for students in economics and business," and it is suggested that the "two volumes may be most effectively used if the instructor dispenses almost entirely with formal lectures, or devotes but one meeting a week to lecture, or only part of each period to lecture, and conducts the course largely on a laboratory or work-period basis." This reviewer is of the opinion that the learning-by-doing approach has much to recommend it. The selection of a text suitable for the course in business statistics hinges so frequently on the adequacy of the accompanying workbook—or the ease of adapting or devising a satisfactory laboratory manual to accompany a selected text—that a frank admission of the inseparability of this text and its *Study Manual* is commendable and timely. However, the text

alone constitutes the basis for this review, and the teacher considering its adoption would doubtless want to examine the manual before making a choice.

A second feature of this text stems, in all likelihood, from this reliance upon the manual; namely, the conciseness of presentation which occasionally imparts a handbook quality to the text. The first seven chapters (102 pages) treat the customary topics of elementary concepts (percentages, ratios, significant digits, tables), index numbers, frequency distributions, and measures of central tendency and variability. The analysis of time series and their graphical presentation receive equally concise treatment in Chapters 11–13 (50 pages). The final two chapters (45 pages) present those aspects of correlation theory which might be considered indispensable to students in a first course of business statistics. The discussion is strengthened by this limitation of scope and the inclusion of interpretative detail and cautions. With few exceptions, illustrations are simplified mathematically. Price relatives from the Consumers' Price Index furnish a convenient stock of numbers to use in explaining statistical techniques. Alternate or short-cut methods of computation are relegated to appendixes following appropriate chapters. Suggested procedures are summarized in step-by-step outlines throughout the text.

A final feature worthy of special note is the careful treatment of the normal curve and sampling-error theory in Chapters 8–10 (75 pages). These bear witness to the growing consciousness of the importance and limitations of sampling to statistics in economics and business, and here again the authors reveal their ability to give a lucid and logical summary of the essentials of the topic at hand.

East Carolina College JAMES H. STEWART

Production Forecasting, Planning, and Control. By E. H. MacNiece. New York: John Wiley & Sons, 1951. Pp. xiii, 305. $5.50.

This book claims to be the "first single book to give an elementary, integrated treatment of all three inseparable factors of production—forecasting, planning, and control." Written from the engineering point of view, it does serve to present such a treatment suitable for a course in schools of commerce as well as engineering. The forecasting discussions, always difficult to compress into the space and time limitations of a book or course, are not as adequate as might be hoped.

Each chapter follows a definite pattern which makes for easy reading: presentation of the chapter's scope, discussions of the various points in logical sequence, summary, short problems or questions, and a discussion case. An unusual feature is a long, practical problem presented as one of the final chapters with one solution to the problem given in the chapter following.

Chapter Nineteen, "Solving Forecasting, Planning, and Control Problems," in somewhat rewritten form, might serve as one of the introductory chapters. Chapter Twenty, "Rules of Conduct," presenting advice and counsel to those entering the field of production-planning, seems outside the scope of the book.

Throughout the text are many figures and charts which in most cases serve to illustrate well the point being made in the discussion. The book is clearly written and seems easy to understand.

The naturally heavy emphasis on the mechanical aspects may lead to a con-

clusion that these problems are somewhat more easily solved than is apt to be the case in actuality. More warnings of the pitfalls that might attend the use of certain techniques might be warranted. This seems particularly true of the discussion of sales forecasting.

With the exceptions noted above, the book does serve to accomplish its purpose. It has gone further than most textbooks in giving a rounded view of the problems involved in production forecasting, planning, and control.

University of Alabama DONALD F. MULVIHILL

An Introduction to Agricultural Economics. By Robert C. Ross. New York: McGraw-Hill Book Co., 1951. Pp. vii, 414. $5.00.

As stated in the preface, this book is, "An approach from the agricultural side in an attempt to provide the historical background and a practical understanding of the economic aspects of present day American agriculture." With the emphasis on the former of the two, Professor Ross has provided an excellent text for a course designed to give students a general survey of agricultural economics without requiring any prior study of economic theory. When compared with Forster and Leager's recent book, *Outlines of Agricultural Economics*, this text is rather light reading which moves along at an almost too rapid pace.

Following a brief introduction, Professor Ross devotes three chapters to the history of American agriculture, covering the periods 1776–1860, 1860–1914 and 1914–1950. Sketching only the outlines of the political, economic, and technological changes which took place, this section is apt to leave most students only with a collection of names and dates if some supplementary information is not provided. The next two chapters are devoted to developing the patterns of production and consumption. In Chapter 5, production statistics are given for many commodities, although the author views the production problem from an aggregate point of view. In this light, he reviews the attempts to control production by legislative action. The consumption aspects are then tied to the production phases, tracing the commodities through processing and distribution. Using what has now become a classical approach, the author shows the importance of the distribution as well as size of income on the consumption of various types of foods. The section is completed with the consideration of the impact of size of the population, rate of growth, and the export market on the consumption picture. This completes the general approach to agricultural economics. Ten chapters are then devoted to consideration of specialized topics.

The subject of prices (Chap. 7) is presented in an oversimplified manner, with the usual demand and supply schedules, seasonal and cyclical fluctuations, etc. In considering the impact of the government programs, the author feels that a permanent price support program, at the expense of the general public, is unlikely, since, "... taxpayers as a group will be unwilling to support a program which confers unusual advantage upon 20 per cent of the population engaged in farming." It appears that Professor Ross is either optimistic about American politics or unwilling to recognize the forces which have been molding our farm policy.

Two chapters are then devoted to marketing and are a workmanlike job that should be more than adequate to introduce the subject. Cooperative marketing (Chap. 10) includes only a bare outline of the subject and may have well been excluded from a text of this type. The subject of foreign trade is treated separately, and it would be disirable if some of this material were integrated with the general marketing and prices sections.

Following the section on marketing and distribution, the author considers those subjects related to production, namely; finance, land economics, farm management, and farm records and accounts. In addition, he includes a chapter entitled Taxation and the Farmer, in which he attempts to convey the impression that "a farmer's lot is not a happy one." After listing the many direct taxes paid by the farmer, with which most of us are familiar, Professor Ross says, ". . . then he (the farmer) reads of hidden taxes . . . small wonder he cannot get ahead." In the chapter on land use, considerable material is presented on soil conservation, viewing the subject in a most favorable light. For an elementary course it might be more desirable to give a less biased viewpoint, although the material included is excellent. Farm management is given only a sketchy treatment, while farm records and accounts are presented in a elaborate manner. When considering the purposes of the book, it would appear that the amount of detail should be reversed on these two subjects.

The two final chapters, considering the broader aspects of the social, political, and general economic position of agriculture, are highly recommended for beginning students. Except as these problems are considered in later courses, the student is not likely to have this material available elsewhere in as complete and easily understood form. This section could also be used as supplementary reading for other courses in sociology as well as agriculture economics.

While Professor Ross has tended only to sketch most subjects, in an effort to cover a wide range of material in one text, this book has certain features which will favor its use by students in a general introductory course in agricultural economics: the material, and the style in which it is presented, is within the grasp of any college student; the excellent bibliography at the end of each chapter provides sufficient material to expand the field covered by any particular subject; and, the material is up-to-date, both with respect to statistics and legislation affecting agriculture, a fact which is of noteworthy importance for this field.

Kansas State College HENRY TUCKER

Interregional Competition in Agriculture: With Special Reference to Dairy Farming. By Ronald L. Mighell and John D. Black. Cambridge, Mass.: Harvard University Press, 1951. Pp. xiv, 320. $5.00.

The authors state that this book is an attempt to bring together empirical research that relates to interregional competition in agriculture. As developed it is restricted to dairy products in the Lake States and New England. Because competition between these regions primarily relates to fluid cream, special emphasis is given to this product. A project on interregional competition in dairying, initiated in 1935 by the Bureau of Agricultural Economics and the Harvard Com-

mittee on Research in the Social Sciences, together with a number of Agricultural Experiment Stations in the two regions, furnishes the core of data used in the analysis.

Except for an introductory chapter and a brief discussion of geography and trends in the dairy industry of the United States, the first 128 pages of the book are devoted to: (1) the development of a theoretical framework, (2) an appraisal of analytic methods, and (3) a statement of procedures. The chapter on the theoretical framework starts with a discussion of comparative advantages, considers the principal of specialization, delves into location theory, relates comparative advantage to demand, and recognizes the force of institutional factors in a section on "the mobility factor and regional adjustments." The analytical chapter appraises the merits of a number of methods in determining comparative advantage. These include: (1) the trend method, (2) the comparative-cost method, (3) the supply-response and the demand-response approach, (4) market and market surplus areas, and (5) supply areas. This is followed by a chapter on the development of supply and demand schedules. Special attention is given to an appraisal of the operating-unit method as a tool for measuring supply and the historical-statistical method as a means for the construction of demand schedules.

Three chapters follow. Two analyze production—one each being devoted to the New England and the Lake State areas—and one considers demand and market pricing. In addition to a summary chapter related to interregional aspects of dairying in the two regions selected for study, two additional chapters are included. One gives attention to interregional competition as it exists for eggs, citrus fruits, potatoes, and vegetable oil crops. A final chapter appraises the techniques developed for studying interregional competition as a tool useful in public policy.

In self appraisal the writers state that two conclusions are warranted (p. 263):

> ...(1) that sampling for case-type analysis can be done, at least in the territory no more varied than that of the Lake States, with a high degree of success and (2) a detailed case budget analysis of a relatively small sample of such an area is likely to show pretty clearly and accurately the fundamental economic relationships within it...

The writers have done a creditable job in focusing attention on the importance of empirical research in furnishing basic data useful in explaining the nature of interregional competition. It is to their credit that they have: (1) reduced their scope of inquiry to a manageable undertaking, (2) stressed the practical implications of their work, (3) recognized the existence of many of the institutional factors involved, and (4) noted the limitations of some of the supporting data and procedures used.

There are those, however, who will: (1) question if sufficient consideration is given to implications of the trade barriers that have grown up with respect to "foreign" dairy products moving in from the Midwest; (2) if adequate attention has been given to the institutional implications that influence the demand side of the equation; and (3) be disturbed by the "beliefs" (p. 198), the "compromises" (p. 252), and resistance to adjustments (well described from pp. 300–305) that

remain as limiting factors in assuring the validity of finding the authors' propose to take out into the work-a-day economic arena.

Cooperative Research and Service Division, Farm Credit Administration MARTIN A. ABRAHAMSEN

Agricultural Marketing. By Adlowe L. Larson. New York: Prentice-Hall, 1951. Pp. xiv, 519. $5.25.

This book is designed for the national market provided by college students taking general introductory or single courses in marketing agricultural products. Most of the charts included among the many illustrations used are from publications of the U. S. Department of Agriculture and other government agencies including the Farm Credit Administration. Other references are generally to publications of rather broad interest without limitation to particular areas.

In preparing this up-to-date textbook, Dr. Larson has combined simplicity in presentation with a breadth of coverage seldom found in marketing texts. The coverage is considerably broader than is indicated by the titles of the six parts into which the book is divided. He begins with a chapter on the market for agricultural products and one on agricultural production, and ends with a chapter each on agricultural cooperation, marketing research, and agricultural marketing policy. The extent to which he gets down to cases is indicated by his including six chapters on marketing functions and four on the major agricultural commodities. Liberal use of topic and paragraph headings in well-organized chapters arranged in logical order adds to the ease with which his presentation can be followed. Students who have had as much as one course in principles of economics will have no difficulty with it.

Organization of the book centers around the commodity chapters, which illustrate the marketing processes and provide the student with a solid frame of reference for his further study of some of the less concrete and more complex subjects covered in the chapters on pricing, monopolistic tendencies, interregional and international trade barriers, cost of marketing, marketing information, and futures trading.

The large number of topics covered, together with the many illustrations which add to the appearance and interest of the book, may leave room for less detail than some students would like on a number of the subjects covered. However, the author has been most generous with footnotes indicating the sources from which the condensations were taken. On one major and increasingly important subject—processing—even the references listed may appear deficient to those readers who recognize marketing as including all of the operations involved in getting products from farms to the final consumers. Yet support for Dr. Larson's method of handling this subject is found in the definition of marketing used and for which he gives credit to a report of the definitions committeee, *Journal of Marketing*: "The performance of business activities that direct the flow of goods and services from producer to consumer."

Although this reviewer would like to have seen some further development of the interrelations between farm production and marketing and between process-

ing and other phases of marketing, a much more adequate treatment of processing and a little less emphasis on monopoly, he considers the book well adapted for use as a text in a general single course in marketing agricultural products.

Mississippi State College OTIS T. OGSOOD

Agricultural Marketing. By Frederick L. Thomsen. New York: McGraw-Hill Book Co., 1951. Pp. x, 483. $6.00.

This book is designed as a beginning text in general agricultural marketing and is well adapted to such courses. That the author has brought to it a wealth of experience is indicated not only on the title-page, but also throughout its contents.

It is divided into six parts: the marketing job; the marketing system; prices and margins; auxiliary services in marketing; potential improvements in marketing; and means of effecting improvements. Even a casual analysis of these parts will reveal an interesting, different approach to the problems of distribution of goods, agricultural or otherwise.

It might be thought that the second part dealing with the marketing system devotes too much attention to various technological changes in production (such as freezing of foods, prepackaging of perishable foods, etc.) but their repercussions upon the marketing system are clearly shown. With this exception, the first two parts present a clear picture of the functions to be performed and the system available to do them.

Part III, dealing with prices and margins, is carefully written. The discussion of the difference between price "determination" and price "discovery" is valuable in pointing out how middlemen are affected by prices—a point often brushed over in general marketing texts.

The section on auxiliary services presents rather a standard discussion, although the section on government market-news reports (under the chapter on market information) is very detailed.

The last two parts contribute greatly to the book's worth by stating, more clearly than is usually the case, the potential improvements in marketing that are constructive (the first chapter of Part V deals with some of the "bizarre" schemes to reform marketing) and the means of effecting improvement. These are broken down into improvements that would expand consumer demand; make for orderly marketing and controlled distribution; and reduce costs and margins; and into means of effecting improvement through individual, cooperative, or governmental action.

Perhaps it is because the book is designed for beginning courses that it contains no questions or problems at the end of chapters—a fact which should not detract from its worth as a text. Neither is a bibliography presented as such, although there are occasional footnote references.

The book should serve its purpose well. In addition, it should be of interest to students and teachers of general marketing and of economics.

University of Alabama DONALD F. MULVIHILL

Sales Management. By D. M. Phelps. Homewood, Ill.: Richard D. Irwin, 1951. Pp. xv, 902. $5.50.

The author states that the purpose of this book ". . . is to present a comprehensive analysis of the problems encountered by marketing vice-presidents and sales managers in modern business enterprises and to discuss the policies that may be followed and the procedures that may be used in their solution." The author's concept of sales management thus encompasses much of the area generally considered to be marketing management, and as a consequence, is broader than that concept in which the field is limited to sales personnel and operating functions.

The book contains seven parts consisting of 29 chapters. Following the first chapter in which the field of sales management is discussed, five chapters of 160 pages are given to planning the product, three chapters of 82 pages to investigation of the market, two chapters of 91 pages to the pricing of the product, five chapters of 161 pages to planning the sales effort, 12 chapters of 325 pages to the management of sales and service personnel, and a final chapter of 27 pages to the control of sales operations. Excellent review questions, a selected list of basic reading sources, and a limited number of short cases and problems accompany each of the major chapters. The book represents the thorough screening of materials, the careful analysis, and the scholarly presentation which can result only from years of research and writing.

Acceptance of the book as a basic text will depend upon the nature and scope of the specific marketing curriculum. The extensive discussion of the many aspects of product policy, and the more than usual emphasis on pricing and market research, duplicate much of the subject matter included in most advanced marketing courses. On the other hand, such topics as distribution channels, inventory control, and physical distribution of goods are omitted on the grounds that they are given attention in basic marketing texts, are of "somewhat different character," or because of time and space limitations. Obviously, similar arguments could be advanced for the omission of some of the topics included in the subject text, particularly those of brands, trademarks, labeling, and pricing, important as they may be.

Professor Phelps has made a worthy contribution to marketing literature. He could have made a greater contribution to present textbook needs, however, if he had expanded his materials into two books, one on marketing management and one on sales management. The addition of such topics as channel selection and control, branch operation, and inventory control to the broader topics included in the present book would have provided the quality and quantity of materials needed in a text for the advanced marketing courses now offered by many universities. The inclusion in a second book of some additional problems and cases, and particularly of more comprehensive problems for analysis, would have provided ample materials for the sales management course as generally given. Thus, two outstanding texts would have been made available to fill the

urgent need for a satisfactory combination of text and problem material in two of the more important courses of the marketing curriculum.

University of North Carolina C. H. McGregor

Advertising Media. By Ed Brennen. New York: McGraw-Hill Book Co., 1951. Pp. xvii, 410. $6.00.

In the field of advertising, one can argue well that three basic matters are of equal importance, the advertiser's story, the audience for whom the story was written, and the vehicle of transmittal that delivers story to audience. Books on copy and books on buyers are numerous, but books on media are few. Hence, *Advertising Media* is welcome.

Part One (of three) consists of ten chapters; three are introductory, and seven describe advertising media. All major and many minor media are included. Part Two tells how advertising is and should be sold. Part Three tells how advertising is bought. An appendix contains a newspaper publisher's Audit Bureau of Circulations statement, a newspaper's annual audit, and a Controlled Circulation Audit report. Just why these three items were selected is not clear.

In the main the material is current and complete. The author's style of writing is less formal than that found in most textbooks. Eighty illustrations and a generous index are assets.

Some readers will question the correctness of designating gifts, packages, and, indeed, sales contests for the advertiser's own salesmen as advertising media. Other readers will feel that premiums, samples, consumer contests, and demonstrations are sales promotion devices—not advertising media.

The preface says, "This book is written specifically for the buyers and sellers of advertising; yet it is of intimate concern to all advertising men." These facts probably explain the omission of features dear to some college instructors—there is no bibliography, no detailed references to sources, and no end-of-chapter questions or problems. There are six footnotes.

The book is useful to instructors as supplementary reading on the topics of media, research, budgeting, and scheduling.

University of North Carolina C. A. Kirkpatrick

STATE REPORTS

ALABAMA

In July and August economic activity in Alabama declined in some lines and advanced only slightly in others. Generally speaking, the economic picture exhibited mixed elements of advance and decline with emphasis on the latter. In the nation as a whole, gross national product increased only slightly in the third quarter, while many indices were off.

In July and August Alabama industrial production exhibited a rise of about 3 per cent over the second quarter, compared with a *fall* of slightly over 3 per cent for the country as a whole. In Alabama the level of industrial production was 3⅓ per cent below the level recorded a year ago, whereas United States production was up about 6½ per cent. For the two-month period the trend is favorable for Alabama, but over the year, unfavorable relative to the nation.

Nonagricultural employment in Alabama was up about 1 per cent in July and August over the second quarter, while in the United States the rise was .4 of 1 per cent. Almost all of the Alabama gain took place in nonmanufacturing industry, including mining. Contract construction was down about 32 per cent in July and August compared to the second quarter, reflecting both a second quarter spurt to beat the inauguration of the controlled materials plan on July 1 and the subsequent relapse and the cumulative effects of various government restrictions. In the United States, similarly, construction was off about 25 per cent. In both Alabama and the United States construction was off about 11 per cent from the level recorded in July and August, a year ago, again reflecting the effects of the new restrictions on construction. Steel ingot production in Alabama was up 8½ per cent in July and August over the second quarter, but was about ½ of 1 per cent below the level of a year ago. In contrast, United States production was 2 per cent *below* that of the second quarter, and *up* 7½ per cent over a year ago.

The consumer price index for Birmingham was down a tiny bit (.05 of 1 per cent) in July and August from the second quarter compared with a similar decline for the United States as a whole. Prices received by Alabama farmers in July and August were 14 per cent below the second quarter level. This was largely due to a decline in the price of cotton from 44¢ a pound in May to 35¢ in August. The decline in prices received by farmers in the United States was only 4 per cent. In Alabama third quarter farm prices are still more than 2 per cent above a year ago, while in the United States the margin exceeds 9 per cent. Alabama retail sales in July were off 9 per cent from the second quarter, while sales tax receipts in July and August were off nearly 3 per cent. However, sales tax receipts were still .6 of 1 per cent above a year ago.

On the whole, the third quarter situation can hardly be said to represent an advance. To be specific, Alabama has lost ground relative to the country as a whole over the current year. Perhaps the United States treasury's shift from a surplus to a deficit position will stimulate business in Alabama. After comparing an estimated treasury surplus of 3½ billion for 1951 with an estimated deficit

of 10½ billion for 1952 (taking account of the new $6 billion tax bill), one can clearly see the inflationary handwriting on the wall.

University of Alabama JOHN S. HENDERSON

FLORIDA

Florida's building boom, which has been rising to new heights yearly since the end of World War II, has slowed down. Government restrictions, especially those on hotel, motor court, and restaurant construction, and material shortages are the chief factors responsible. However, building permits in at least 16 cities for the first six months of 1951 exceeded those granted in the first half of 1950. Apartment house construction permits, not subject to NPA control, totalled 589 for the period for an increase of 30 per cent in dollar volume.

Although the major portion of the dollar value of permits granted from January to June 1951 was accounted for by more than 10,000 new dwelling units, new industrial plants worth more than $175,000,000 have been completed, started, or announced for Florida in 1951. A wide variety of products are represented in this group but 60 per cent of the total was accounted for by new or expanded paper and other wood cellulose products plants. This growth will virtually double the capacity of Florida's paper and pulp mills.

* * *

Florida like most of the southern states received only an insignificant fraction of total military contracts awarded during the first year of the Korean conflict. Many small business firms, whose normal operations utilized materials now rationed for defense have been particularly hard hit. At the same time the state is again benefitting from the direct expenditures by the military for their installations. The value of such properties was reported to be $310,000,000 in a recent report to the House Appropriations Committee.

* * *

A record smashing Florida citrus crop of 112,500,000 boxes was forecast in October by the U. S. Department of Agriculture, compared to last year's 105,300,000 box crop. Last season 60 per cent of the crop was canned or concentrated. With some carry-over of this stock both the Florida Citrus Commission and private producers were having to redouble their sales promotion efforts. In the concentrate field, Minute Maid Corporation, one of the large concentrate producers, proposed a plan to pay growers a fixed floor price for oranges designed to cover costs of growing, picking, and hauling. Then after the season was over the company would split its net revenues with the growers on a 50-50 basis. Reaction to this proposal among growers was still uncertain but the company set 2,000,000 boxes of fruit as the minimum that must be covered by the plan to put it into effect. Negotiations were well advanced last fall for the sale by Clinton Foods (Snow Crop) of all of its Florida assets, other than its grove properties, to the Florida Citrus Exchange, heretofore chiefly marketers of fresh fruit and "Seald-Sweet" processed products. Completion of this multi-million dollar transaction will mark another step toward vertical integration in the industry.

University of Florida C. H. DONOVAN

GEORGIA

One of the most remarkable and rapid developments in Georgia's economy during the past 16 years has been the development, literally from "scratch," of the commerical broiler industry. In 1935, a total of 500,000 birds was produced, with a value of $250,000; last year nearly 63 million broilers, or 126 times as many as in 1935, were marketed, with a gross income of $45,500,000. The 1950 figure represented a 38 per cent increase over 1949, set a new all-time high for the state, and made Georgia the second largest broiler producing state in the country, exceeded only by Delaware. The broiler industry in Georgia is confined mainly to the northern counties of the state, particularly Hall, Forsyth and Cherokee, but is rapidly expanding into other sections. Prospects for its further growth have been further enhanced by the recent development at the College Experiment Station in Athens of a new broiler-type chicken called the Georgia-Light.

Total cash income of Georgia farmers in 1950 increased 17 per cent over 1949, with livestock the largest contributing factor. Preliminary estimates of the Georgia Crop Reporting Service place the 1950 income, including government payments, at $529,991,000 compared with $453,574,000 the previous year. Gross income, which includes products consumed on the farms, is placed at $650,030,000 compared with $578,683,000 in 1949. Georgia's fast growing livestock industry contributed 36.3 per cent of the total cash income. Cotton was second with 21.9 per cent, followed by peanuts, 13.1 per cent, and tobacco, 9.6 per cent.

Much has been said and written about the industrial progress made in Georgia during the past decade, progress that has meant a rapid approach toward a better balance between agriculture and industry. The most direct, and perhaps the most important, effect of this industrial development has been in the increased income it has brought to workers in the form of wages and salaries. For example, in the past 10 years income received from manufacturing payrolls in Georgia has increased 304 per cent. The total of $2,117,000,000 received by Georgia workers in wages and salaries in 1950 was more than $200,000,000 above the corresponding figure for 1949, and almost $250,000,000 more than in 1948.

Employment in Georgia reached an all-time high of 841,800 workers early last fall, and despite a decline of some 3,000 employed persons during September, continued at a high level, according to statistics compiled by the Georgia Employment Security Agency and released by Commissioner of Labor B. T. Huiet. The figures, which do not include farm workers or the self-employed, were considerably larger than during World War II. For comparison, total employment in Georgia in December 1945 was 781,000, and in December 1950 it was 826,000.

Emory University ALBERT GRIFFIN

KENTUCKY

When Kentuckians go to the polls in November, they will decide on a proposed constitutional amendment which would permit future amendments to be submitted to the people with less delay after being approved by the General Assembly. It also would allow more than two amendments to be submitted at one time.

Official figures for the production of minerals in the state during 1950 were released September 30 by the Department of Mines and Minerals. Though both the number of men employed and mines operating declined from the previous year, coal production amounted to 82,176,693 tons, slightly under the total for 1949. The record year was 1947 with an output of 88,695,527 tons. Forty-nine of the state's 120 counties produce some coal. A total of 81 fatal accidents occurred in the coal industry during the year. The Department closed 1,206 mines because of unsafe practices, 240 more than in 1949. Fall of roof and coal was the largest contributing cause, accounting for 64.6 per cent of the fatalities. Clay production amounted to 1,346,425 tons produced by 1,172 workers in 43 mines. Just over ten million barrels of oil were produced. Of 270 wells drilled, 60 were oil wells, 178 gas, and 32 non-productive.

Vice-President Alben Barkley made the principal address at the dedication September 1 of Wolf Creek Dam. This multi-purpose project creates a lake in Cumberland River which is 101 miles long. It is expected to assist in flood control, produce electric power, and provide abundant recreation facilities. The present capacity of the power plant is 270,000 kilowats, approximately one third of the expected ultimate installed capacity. The dam itself has a maximum height of 240 feet above its lowest foundation. It is a combination concrete and earth fill structure, 1,796 feet being concrete and 3,940 feet being earth fill. A portion of U. S. Highway 35 is atop the dam.

On October 15 the State Department of Revenue reported the total value for assessment purposes of property within the state to be $3,604,585,109. Real estate assessments rose $82,269,542 in the last two years, compared with a rise of $215,194,748 for intangibles in the same period. Thirteen counties showed losses in real estate assessments, but only two had a net loss in total property values.

The legislatively created citizens committee on Functions and Resources of State Government has recommended that the state follow the lead of Indiana in making relief rolls open to the public should federal law be amended to so provide.

University of Kentucky RODMAN SULLIVAN

LOUISIANA

Business activity in Louisiana during the summer of 1951 reflected the declines in consumer goods sales that occurred in most of the nation. The decreased evidence that there would be significant shortages in these items coupled with the results of scare buying during late 1950 and early 1951 caused declines in retail sales from the high January–March level (even after seasonal adjustment). Although the sales levels were considerably below the expectations of businessmen who had based their summer plans upon the records of the previous months, the actual index of department store sales in Louisiana in August 1951 was 160.5 as compared to 170.7 for August 1950. Sales had increased from April 1951 to August 1951 to reach the index of 160.5.

The relative softness in consumer goods did not carry over to industrial activity and the composite index of business activity in Louisiana for August 1951

stood at the same level as August 1950. All measures of industrial activity showed gains over the 1950 levels. These offset declines in consumer buying and maintained overall business conditions at approximately the same level as existed in the summer of 1950. Unemployment benefit payments in August dropped 35 per cent from the previous year's level.

The outlook for rural Louisiana was generally bright. In the middle of the harvest season, indications were that the cotton crop would exceed the 1950 crop by 30 per cent to 40 per cent. Although cotton prices are below their level of early 1951, prices approximated those received for the 1950 crop. These factors mean that cotton revenues will exceed the 1950 revenues by about one-third. Favorable pastures and crop conditions coupled with good prices point to a successful year for both livestock and dairy farmers. Good yields in rice will be partly offset by lower prices. Perhaps the most unfavorable part of the state's agricultural picture is in sugar. Estimates for the 1951 crop reflect both declines in tonnage and in the sucrose content of the cane.

Louisiana State University W. H. BAUGHN

MISSISSIPPI

Final census figures show Mississippi decreased slightly (5,000 or 0.2 per cent) in population between 1940 and 1950. At the same time the per cent of urban population increased from approximately 20 to approximately 28. Although at this writing complete figures on racial breakdown are not available, preliminary data indicate that the white-negro ratio has shifted from an almost even 50-50 in 1940 to approximately 55-45 in 1950. This last appears significant in the state which has had the largest percentage negro population in the country.

Dry weather and high temperatures in early September probably cost the cotton growers in Mississippi something like $30 million. The Department of Agriculture's September 1 estimate for 1951 production was 17,291 thousand bales for the United States and 2,000 thousand bales for Mississippi. The October 1 estimate was 16,931 thousand and 1,800 thousand respectively. Thus, of a total reduction of 360 thousand bales from the September 1 estimate, 200 thousand bales was from Mississippi.

In the April 1951 issue of the *Journal*, a brief report on the work of the Legislative Fact Finding Committee on Reorganization of State Government was given. As appeared evident when that was written, the work of the committee came to naught. However, as a new legislature approaches, several members of that committee who will be members of the new legislature are planning to redraft the far-reaching earlier proposals and submit some very limited recommendations. The major proposal to be submitted calls for the creation of a state purchasing agency to handle all the state's buying. In the earlier *Report*, such an agency was counted upon to effect the major portion of an estimated $5 million saving. A companion recommendation will be a revamped budget commission and a department to handle preaudits to eliminate the operation of some departments beyond their appropriations.

Present indications are that all possible savings will be needed. Although the

Budget Commission has not yet published its proposed budget for the biennium beginning July 1, 1952, it is reliably reported that requests total $200 million, whereas the appropriations for the current biennium were only $131 million, of which $16 million were for nonrecurring items. The anticipated surplus for this biennium and revenue for the next will fall far short of the requested amount.

University of Mississippi DAVID MCKINNEY

NORTH CAROLINA

The General Assembly of 1935 created the North Carolina Rural Electrification Authority. At the end of 1935, when the authority was just beginning its work, there were in the state 1,884 miles of rural lines distributing electricity to 11,588 farms. The percentage of electrified farms was 3.8 as compared with 11.6 for the United States as a whole.

As a result of rapid construction that was uninterrupted even by the war, the total mileage of rural distributing lines is now approximately 70,000. These lines serve 450,000 customers, of which 242,000 are farms. The percentage of farms electrified is now 84,000 which is approximately identical with the national average. Only Texas has more farms than North Carolina, and only Texas has more farms with electric service.

This expansion has been the joint result of public and private enterprise. Privately owned power companies own approximately 45 per cent of the rural lines and supply about 60 per cent of the customers. Rural Electric Membership Corporations own 50 per cent of the mileage and supply 3 per cent of the customers. The remaining rural lines are extensions of municipal systems and of those of public institutions. The privately owned power companies serve about 12 customers to the mile on the average, the Rural Electric Membership Corporations about 5. The extension of the lines into every county of the state has, of course, revolutionized the mode of living of the farm population and improved the means of economic production.

Davidson College C. K. BROWN

SOUTH CAROLINA

More than 800 plants, representing an investment of more than $385,000,000, have been located in South Carolina since January 1, 1945. There have also been over a thousand plant expansions at a cost of $269,000,000. These new industrial plants have been built in South Carolina largely because of a plentiful supply of relatively unorganized workers. In addition, the supply of water, power, natural resources, and the proximity to markets are such as to make South Carolina a strategic spot for industrial expansion.

The textile industry in South Carolina has been one of the leading industries in the State for over a half century. Since 1945 the expansion in the textile field has been tremendous. Whereas cotton textiles once dominated this field and probably still does, the expansions of processing facilities for synthetic fibers have been outstanding. The textile industry in South Carolina has expanded through the manufacture of different types of fibre, and also in the degree to which they

are turned into finished products. Cotton, rayon, nylon, orlon, and other fibres too new to mention are now processed in South Carolina. The process does not stop with the manufacture of the fiber, the spinning, and weaving. Garment making is beginning to develop in the State which is an opening for a broad new field.

Textiles is not, by any means, the only field of industrial expansion in South Carolina. It is merely the one in which the greatest development has taken place.

The total funds requested to build the Aiken Hydrogen Bomb Plant is $1,180,000,000. The plant, being built along the Savannah River, is designed to produce ingredients for the H-bomb. These products will be utilized elsewhere. The huge expenditures so far are just for plant construction. Manufacturing costs will probably be just as phenomenal since tritium, a key explosive for the H-bomb, costs $500,000,000 a pound as made from atomic reactors.

The cost of perfecting the first A-bomb was estimated at $2,000,000,000. Present requests of congress for funds for atomic and H-bomb developments total over $7,000,000,000. In July 1951, over $4,900,000,000 had already been spent on the A-bomb.

Such tremendous expenditures in this basically rural area causes quite a demand on a short labor market and a splurge of consumer spending in local business establishments. The growing pains of this area are reflected in a housing shortage, a competion for laborers, and a shortage of many consumer goods. Although this may appear serious to the individuals involved, it is a good omen. More industry will result in a better balance of the economy in this rural area.

Clemson College JAMES F. MILES

TENNESSEE

Industrial expansion in Tennessee very likely will set new records in 1951 despite the latest ban placed on construction by the National Production Authority. The ban does not apply to building already started. Construction deemed necessary to the national preparedness program likewise would not be affected.

Industrial planning leaders have predicted the growth of industry in the state at more than $150,000,000 for the year, with approximately $100,000,000 already spent in new plants and expansions. Military contracts for goods and services to the armed forces and military installations will help keep industrial expansion high. From July 1950 through April 1951, Tennessee had received a total of $113,104,000 in military contracts to lead all the southeastern states.

A step toward further industrial expansion in the future was taken by the 1951 Tennessee State legislature when they passed the Industrial Building Revenue Bond Act authorizing cities to construct buildings for industrial tenants through revenue bond financing. The constitutionality of this law was upheld by the Tennessee Supreme Court in late August. Under provisions of the law, municipalities can issue revenue bonds to finance the construction, purchase or improvement of buildings within the limits of the municipality or up to ten miles beyond the city's boundaries.

The provisions of this act differ from the well-known Mississippi Balance

Agriculture With Industry law. Under the Tennessee law, the credit of a city is not obligated by the issuance of these industrial revenue bonds. The buildings are owned by the city, but must be rented or leased on terms which will provide for retirement of the principal of the bonds and payment of interest on them. The bonds cannot be redeemed by tax levies and do not constitute any indebtedness on the community.

Three cities to date have taken action under the new act with a total of $4,550,000 in bonds. Others are considering action. Up to mid-October only the smaller municipalities had manifested interest. This is to be expected as it is in these communities that the most acute shortage of choice plant space, either for lease or purchase, is to be found usually.

On the agricultural front, cotton brought Tennessee farmers the most cash in 1950 and cattle ranked second as a cash crop in the state. The total cash receipts for farm produce in Tennessee in 1950 amounted to $430,344,000. That was one per cent less than the farmers received in 1949 for their cash crops. Not included in the total cash receipts figure was $6,735,000 received by Tennessee farmers in 1950 in government payments.

Farm prices received on local markets have been declining since mid-May 1951, although the index is approximately five per cent higher than of the same date in 1950.

Tennessee continues to be one of the country's "Top Opportunity" states because of her many agricultural, industrial and climatic advantages. In its recently revised publication "Where Will Tomorrow's Opportunities Be?", the American Institute for Economic Research ranked Tennessee with four other states in the top bracket.

George Peabody College for Teachers JAMES E. WARD

VIRGINIA

This is a year-end appraisal of general business conditions in Virginia for 1951. An over-all picture for the nation at large shows that business is in a boom of enormous magnitude, dominated by expenditures for capital goods and defense. According to the October bulletin of the National City Bank, the country's investment in industrial plant and equipment, construction, and inventories in the first half of 1951 represented 19.1 per cent of the gross national product, the highest ratio ever recorded. Another 17.5 per cent of the national product was diverted to satisfy government demand for goods and services, a total of 36.6 per cent in these two classifications.

The pressures from these areas upon Virginia's economy for the past 11 months have been intense. Yet, despite these, changes in general business conditions throughout the state have not been very spectacular. Retail trade in the first 8 months of 1951 showed an increase of only 6 per cent. Retail furniture sales showed the greatest gain in the past months, and as a result of the increased orders noticeable improvement in furniture manufacturers should soon be forthcoming. In general, judging from the many sales campaigns at the beginning of the fall season, one might conclude that the retail trade has been over-inventoried.

Likewise, wholesale trade has moved very slowly and within narrow ranges. Construction awards for the first 8 months of this year were considerably ahead of the same period of last year. Primarily responsible for this rise was the gain in residential buildings, particularly apartments, hotels, and one-family and two-family houses. Considerable expansion in military construction is projected for the next six months. This is expected to affect the demand for manpower, and employment in private industry may have to be curtailed to meet it. Other industries which are showing the effects of the national trend are bituminous coal, rayon, tobacco, paper, and lumber. Lumber production for the next several months will bear watching. With the enactment of the military construction bill, and the heavy demand for small houses, the demand for lumber should be very heavy. An increasing shortage of goods is expected, and even in the face of increasing incomes, consumer expenditures are apt to decrease. Savings will expand with the result that time deposits, savings bonds, and life insurance will increase. Debits to individual accounts showed a sharp increase in the first 8 months of 1951. In summary, it appears that the armament program gives defin'te prospect of continued high rate of business activity during the next several months. It must be recognized, however, that the present rate of activity is one of boom proportions which is still subject to many of the adjustments of previous boom periods.

Agricultural conditions in the state are at about the same level as in 1950. While the volume of crops produced is lower by about 4 per cent with a little higher average in prices, yet the cost of production is the highest on record. There has been an increase of about 12 per cent in the farmers' cost of production. The mainstay crops of Virginia, such as tobacco and apples, failed to show an increase, with the result that farm income from the state remained at about the 1950 level. This was made possible largely by a good livestock year. Farm mortgage indebtedness has been increasing due to young farmers' buying farms, and the increasing size of farms to suit machine production. These have brought about an increase in land values.

The Virginia budget for the 1952–1954 biennium has been in preparation for several months. Some very interesting things have developed. Requests from state agencies total over $731 million, an increase of more than $200 million over the 1950–1952 budget. There seem to be two very potent factors in these increased demands. First, the rise in the cost of living. Salaried personnel are feeling the pinch of rising prices. Also, state institutions, hospitals, welfare, and education, find that prices of food and clothing have skyrocketed. The second factor is a desire of the agencies to expand and provide better standards of service. Larger and better physical facilities are being demanded by the public. A final interesting fact is that this budget will be pared down by the Director of the Budget to meet the tax pattern since it is generally agreed that a tax increase at this time cannot be justified.

University of Richmond HERMAN P. THOMAS

PERSONNEL NOTES

H. A. Adams is acting professor of business administration at Delta State Teachers College.

Joseph Airov has resigned as instructor in economics at the School of Business Administration, Emory University, in order to pursue further graduate work at Harvard University.

William H. Alexander, associate agricultural economist at Louisiana State University, is on sabbatical leave for one year to pursue advanced training at the University of Illinois.

Clark L. Allen, professor and head of the Department of Economics at Florida State University, presented a paper on "Modern Welfare Economics and Public Policy" at the last annual meeting of the Southern Economic Association at Knoxville, Tennessee on November 16.

Russel Altenberger has been appointed instructor in statistics at Alabama Polytechnic Institute.

Arthur Ashbrook has resigned from Duke University to join the staff of the Office of Price Stabilization as district economist of the Charlotte office.

Victor J. Baran has resigned as instructor in economics at the University of Virginia to become Captain in the United States Army.

L. W. Barnes has been added as a part-time faculty member to the School of Industrial Management, Georgia Institute of Technology.

Harry Benefiel has resigned as head of the Department of Commerce of McNeese State College, Lake Charles, La.

Homer Black, associate professor of accounting at the College of Business Administration, University of Georgia, is on leave working on his doctorate at the University of Michigan under a John Harper Seeley fellowship.

Bill Bolton has been appointed research associate in agricultural economics at Louisiana State University.

J. H. Brashear, formerly with the Department of Economics at the University of Florida, is now with Elon College as assistant professor of business administration.

W. E. Breese of the College of Business Administration, University of Florida, spent six weeks during the summer of 1951 studying the operation of the S. H. Kress Company, at the company's invitation, under the College-Business Exchange program of the Foundation for Economic Education.

Hoyle Edward Brewer, assistant professor of economics at Louisiana Polytechnic Institute, attended the University of Arkansas during the past summer. He was continuing work leading to the Ph.D. degree.

Inez R. Brown has been appointed instructor in business education at St. Mary's Dominican College, New Orleans.

D. H. Buchanan, professor of economics in the School of Business Administration, University of North Carolina, has been appointed research professor for the

current academic year in the University of North Carolina Institute for Research in the Social Sciences. His work is in the area of East-West Relations.

Richard P. Calhoon of the University of North Carolina School of Business Administration conducted a course in Conference Leader Training at the American Enka Corporation for two weeks in early September.

Carl E. Calohan has resigned as instructor of economics at the University of Florida to accept a position as chief price analyst, Office of Price Stabilization.

Thomas H. Carroll, dean of the School of Business Administration, University of North Carolina, spoke at the year-opening meeting of the area chapter of the Society for the Advancement of Management in Greensboro, N. C., on September 20. His subject was: "Why This Emphasis on Human Relations." He also read a paper on "The Educational Need for Increasing Convergence of Management Theory and Practice" at the last annual meeting of the Southern Economic Association in Knoxville, Tennessee on November 17.

John Champion, assistant professor of accounting, has returned to the College of Business Administration, University of Georgia, from a year's work on his doctorate at Indiana University.

Herman H. Chapman has resigned his position as director of the Bureau of Business Research and will devote his full time to his duties as head of the Department of Statistics and professor of statistics at the University of Alabama.

Ernest C. Collins has resigned as assistant professor of business organization, University of Florida, to accept a position with Lockheed Aircraft Corporation.

W. S. Connor, associate professor of economics, College of Commerce, University of Kentucky, has resigned to accept a position with the Bureau of Standards.

Edward G. Cornelius has resigned as professor of business administration at Louisiana Polytechnic Institute to accept a position with Tennessee Polytechnic Institute.

C. Merle Crawford, instructor in marketing at the University of Florida, is on leave of absence to pursue further graduate study at the University of Illinois.

Alan Dailey has joined the Department of Business Administration at Mississippi State College as an assistant professor.

Robert L. Dickens, instructor of accounting at Duke University, has received his C. P. A. certificate.

C. H. Donovan of the College of Business Administration, University of Florida, spent six weeks during the summer of 1951 studying the operation of the Chase National Bank, at the bank's invitation, under the College-Business Exchange program of the Foundation for Economic Education. He was elected to the board of editors of publications of the Southern Economic Association at its last annual meeting.

A. R. Dooley, lecturer in business administration in the School of Business Administration, University of North Carolina, addressed the Joint Annual Convention of the Associated Credit Bureaus of America, Virginia-North Carolina chapters, on October 22. The subject of his talk was "Credit Bureau Research." On November 16, Mr. Dooley spoke to the National Association of State Savings

Building and Loan Supervisors at their 12th annual convention, held in Greensboro, N. C., on "Interest Rates and Government Financing."

C. L. Dunn has been appointed assistant professor of accounting at Louisiana State University.

Edgar S. Dunn, Jr., has returned to the University of Florida as assistant professor of economics after completing his graduate work at Harvard University.

James H. Edmondson, formerly at George Peabody College for Teachers, has been appointed head of the Department of Business and Economics at Ouchita College. He assumed his new duties at the beginning of the current academic year.

Robert D. Entenberg of the University of Missouri has been appointed assistant professor of marketing at the College of Business Administration, University of Georgia.

Daniel Evertsz has been appointed instructor in business administration at Southern University, Baton Rouge, La.

Daniel Fellers has been appointed instructor in accounting at Louisiana State University.

Peter A. Firmin, assistant professor of accounting at Tulane, has been granted a leave of absence to continue his graduate work at the University of Michigan.

A. C. Flora, Jr., was appointed assistant professor of economics in the School of Business Administration at the University of South Carolina, beginning September 1951.

Robert L. Froemke, assistant professor of business administration, has returned to the College of Business Administration, University of Georgia, from a year spent at the Massachusetts Institute of Technology under a General Education Board fellowship.

Louis A. Gaitanis has been promoted to associate professor of business organization, University of Florida.

Reid W. Gattis has been appointed instructor in real estate at the University of Florida.

G. W. Gilman has been added to the faculty of the School of Industrial Management, Georgia Institute of Technology.

Rudyard Goode has been appointed instructor in economics at the University of Virginia.

Frank Goodwin of the College of Business Administration, University of Florida, spent six weeks during the summer of 1951 studying the operation of the Pittsburgh Plate Glass Company, at the invitation of the company, under the College-Business Exchange program of the Foundation for Economic Education.

Richard W. Graves has been appointed instructor in statistics at Tulane University.

Eugene R. Guinter has resigned as associate professor of business administration at Louisiana Polytechnic Institute to accept a position with the Office of Price Stabilization.

Paul N. Guthrie, professor of economics at the University of North Carolina School of Business Administration, has been appointed public member of the

Wage Stabilization Board for Maryland, District of Columbia, Virginia, West Virginia, and North Carolina.

David Guyton has retired as professor of social science at Blue Mountain College.

Frank Hanna has been promoted to professor of economics at Duke University.

Roane Hathorn has been appointed research associate in agricultural economics at Louisiana State University.

R. M. Havens of the University of Alabama is on leave with the Economic Cooperation Administration.

Langston T. Hawley, professor of economics at the University of Alabama, was elected second vice president in charge of membership of the Southern Economic Association at its last annual meeting.

Milton S. Heath, professor of economics at the University of North Carolina School of Business Administration, continues during the 1951–52 year as research professor in the UNC Institute for Research in the Social Sciences.

Frank L. Hendrix has been awarded the Ernest Abernathy Fellowship for Research in Southern Industry at the University of North Carolina School of Business Administration.

William T. Hicks, recently chairman of the Department of Marketing at the University of Georgia and senior economist for the Atlanta Federal Reserve Bank, has accepted the chairmanship of the Department of Economics and Business Administration at the University of Mississippi.

Clyde Hill, who received the MBA degree from the University of Mississippi last summer, is now part-time instructor in office administration in the same institution.

Henry G. Hodges, who has been serving as lecturer in management at the University of Florida, has been appointed professor of management there. He read a paper entitled "Management of our Universities" on November 17 at the last annual meeting of the Southern Economic Association.

Melvn J. Humphrey has resigned as instructor in business administration at Southern University, Baton Rouge, La.

Carl Hyldburg has resigned his position as instructor of business law at Duke University to enter the private practice of law.

Elmo L. Jackson has returned to his position as associate professor of economics at the University of Florida after a leave of absence of a year and a half at Vanderbilt University to complete a research study on the cigarette tobacco markets.

Robert M. James has resigned as assistant professor of accounting at the University of North Carolina School of Business Administration to become legislative auditor for the State of Washington.

Frederick C. Joerg has been promoted to associate professor of economics at Duke University.

J. B. Johnson has been appointed associate professor of business administration at Louisiana State University.

John O. Kling has been appointed research associate in agricultural economics at Louisiana State University.

Frank J. Kottke, associate professor of economics at the University of North Carolina School of Business Administration and now on leave with the Federal Trade Commission, read a paper on "Monopoly and Mobilization for Defense" on November 16 at the last annual meeting of the Southern Economic Association.

C. E. Landon, associate professor of economics at Duke University, is on leave for the first semester of 1951–52.

Carey B. Lewis, Jr., has resigned as instructor in accounting from Southern University at Baton Rouge, La.

G. W. Leftwich, assistant professor of marketing at Loyola University of New Orleans, is on leave of absence for one year to serve as economic analyst with the Office of Price Stabilization.

Clement S. Logsdon, professor of marketing at the University of North Carolina School of Business Administration has been granted a leave of absence to engage in research for the Strategic Air Command of the Air Force.

John H. MacKay, instructor in accounting at Tulane University, has been granted a leave of absence to do graduate work at the University of North Carolina.

Denis McAuliff has been appointed associate professor of economics at St. Mary's Dominican College, New Orleans.

E. L. McGowan, instructor in accounting in the School of Business Administration at the University of South Carolina, has been promoted to the rank of assistant professor.

Lionel W. McKenzie, who has been on leave of absence from Duke University for special graduate work at the University of Chicago, has returned to his teaching position.

Carl H. Madden has been appointed research assistant in the Bureau of Population and Economic Research of the University of Virginia.

John P. Maggard has been appointed part-time instructor in economics in the School of Business Administration of the University of North Carolina.

L. F. Mansfield has resigned as instructor of economics at Duke University to complete his graduate work.

T. B. Martin, head of the Department of Business Administration at Delta State Teachers College, is on leave of absence for 12 months to do graduate study at Indiana University.

John G. Masterson has resigned as associate professor of economics at St. Mary's Dominican College, New Orleans.

C. Arnold Matthews is on military leave of absence from the University of Florida and is now teaching at the U. S. Naval Academy.

John R. Matthews has been appointed instructor in economics at the University of Virginia.

Charles N. Millican of the College of Business Administration, University of Florida, spent one month during the summer of 1951 studying the operation of the First National Bank of Orlando, Florida, at the bank's invitation, under the College-Business Exchange program of the Foundation for Economic Education.

H. H. Mitchell has been appointed assistant professor of economics at Alabama Polytechnic Institute.

W. E. Moeller has been added to the faculty of the School of Industrial Management, Georgia Institute of Technology.

Henry V. Moore, formerly director of the Bureau of Business Research at the University of Colorado, has been appointed director of the Bureau of Business Research and professor of economics at the University of Alabama.

J. A. Morris, assistant professor in economics in the School of Business Administration at the University of South Carolina, has been promoted to the rank of associate professor. He was awarded his Ph.D. degree at Harvard in June 1951.

William F. Moshier has resigned as assistant professor of accounting to take a position as assistant to the auditor at the University of Florida.

Olin T. Mouzon, professor of economics at the University of North Carolina School of Business Administration, served as a delegate to the Brookings Institution's Southern University Conference at Asheville, N. C., from September 6–11. This conference, attended by some 120 persons, was a joint study of the International Studies Group of the Brookings Institution and federal officials from state and defense agencies. The conference considered problems of U. S. foreign policy.

Jack N. Ockerlander has resigned as instructor in economics at the University of Virginia.

Clifton Oliver of the College of Business Administration, University of Florida, spent six weeks during the summer of 1951 studying the operation of the W. T. Grant Company, at the invitation of the company, under the College-Business Exchange program of the Foundation for Economic Education.

John T. O'Neil, associate professor of finance at the University of North Carolina School of Business Administration, has been granted half-time leave in order to serve as research director for a Business Executives' Research Committee which will study problems of interest to the North Carolina region. The committee will be formed of prominent junior executives of the state who, together with members of the faculty of the School of Business Administration of the University of North Carolina, will engage in research on whatever problems develop the most interest.

J. Reid Parker went on leave in September from the Agricultural Economics Department, Clemson College, to enter graduate school at Duke University.

H. E. Perry has accepted the position of assistant professor of accountancy at the University of Mississippi. Last year he was doing graduate study at Indiana University.

Wilbur Lee Perkins has returned from sabbatical leave to resume his duties as assistant professor and head of the Commerce Department at Northeast Louisiana State College.

George S. Petras has resigned his position with the University of Georgia to become labor economist with the Wage and Hour and Public Contracts Division of the Department of Labor in Washington.

Clarence Philbrook, associate professor of economics in the School of Business Administration, University of North Carolina, delivered a paper entitled "A Re-Examination of Keynesian Economics in the Light of Employment Experience since 1940" on November 16 at the last annual meeting of the Southern Economic Association. He has been appointed an editor of *The Southern Economic Journal* by the University of North Carolina.

O. S. Pugh, instructor in economics in the School of Business Administration at the University of South Carolina, has been awarded a General Education Board fellowship and is on leave for the year 1951–52 continuing his graduate work at Duke University.

B. U. Ratchford, professor of economics at Duke University, was elected first vice president in charge of program of the Southern Economic Association at its last annual meeting.

Pauline Rawlings has resigned as assistant professor of commerce at Mississippi Southern College.

M. A. Reilly has resigned from the Department of Business Administration at the Citadel to become head of the Department of Business Administration and business manager at Presbyterian College.

J. G. Richardson of the College of Business Administration, University of Florida, spent six weeks during the summer of 1951 studying the operation of the National Biscuit Company, at the company's invitation, under the College-Business Exchange program of the Foundation for Economic Education.

Marshall A. Robinson, assistant professor of economics at Tulane University, has been granted a leave of absence for the 1951–52 session to serve as research associate with the National Bureau of Economic Research.

Costic Roman, head of the Department of Secretarial Studies at the University of Georgia, is studying this year on his doctorate at Indiana University.

R. L. Rouse has been appointed acting head of the Commerce Department of McNeese State College, Lake Charles, La.

Thomas C. Sanders has been appointed instructor in economics at the University of Virginia.

Rodney G. Sarle, formerly of the University of Maryland, has been appointed lecturer in business administration at the University of North Carolina School of Business Administration.

Lloyd Saville has been promoted to associate professor of economics at Duke University.

Howard Schaller has been appointed research associate on the project Study of Differences in Per Capita Incomes directed by Professor Frank A. Hanna at Duke University.

Haskell Seal has been appointed research associate in agricultural economics at Louisiana State University.

Edward C. Simmons, professor of economics at Duke University, read a paper on "The Uses and Limitations of Monetary-Fiscal Policy in Economic Stabilization" on November 16 at the last annual meeting of the Southern Economic Association.

Howard R. Smith, professor of economics at the University of Georgia, was elected secretary-treasurer of the Southern Economic Association at its last annual meeting.

Augustus W. Springer, Jr., instructor in economics at the University of Virginia, has been called to active service as a Lieutenant in the United States Army.

Robert L. Stallings, associate professor of finance at the University of North Carolina School of Business Administration, has been granted a leave of absence to continue his graduate studies at the University of Illinois.

Hubert F. Stepp, who formerly taught economics at the College of Charleston, is now teaching economics at Winthrop College.

Albert Sterkx has been appointed instructor in business administration at McNeese State College, Lake Charles, La.

James H. Stewart, formerly at Washington and Lee University, has been appointed professor of economics at East Carolina College, Greenville, N. C. He received his. Ph.D. at the University of Kentucky last August.

George W. Stocking, head of the Department of Economics at Vanderbilt University, was elected president of the Southern Economic Association at its last annual meeting.

Harold L. Streetman has been granted a leave of absence from the Agricultural Economics Department at Clemson College to continue work towards his doctor's degree at Ohio State University.

Ernst W. Swanson, professor of economics in the School of Business Administration, Emory University, read a paper on "The Economics and Politics of Group Behavior in Pricing and Allocating Resources" on November 16 at the last annual meeting of the Southern Economic Association.

Victor W. Sweeney, who has been promoted to professor of insurance at the University of Florida, spent several weeks during the past summer studying the operation and management of the Peninsular Life Insurance Company at the company's invitation.

Leslie Syron, assistant professor of economics and sociology at Meredith College, was awarded the Ph.D. degree by the University of North Carolina in August 1951.

James W. Taylor, formerly of the Veteran's Administration, has been appointed assistant professor of marketing at Mississippi State College.

William A. Terrill, formerly of the University of Illinois, has been appointed assistant professor of accounting at the University of North Carolina School of Business Administration.

K. M. Thompson has been appointed assistant professor of economics at Louisiana State University.

H. C. Toler has been appointed instructor in marketing and retailing in the School of Business Administration at the University of South Carolina, succeeding A. B. King, who resigned to accept a position with the Office of Price Stabilization in South Carolina.

G. W. Tomlin, associate professor of economics in the School of Business Ad-

ministration at the University of South Carolina, is serving as consultant with the Office of Price Stabilization in South Carolina.

Minnie B. Tracey has been appointed professor of marketing at Louisiana Polytechnic Institute.

Henry Tucker, formerly with the Institute of Statistics, North Carolina State College, University of North Carolina, has joined the staff at Kansas State College.

Frank Tuttle of the College of Business Administration, University of Florida, spent six weeks during the summer of 1951 studying the operation of the Jones & Laughlin Steel Company, at the invitation of the Company, under the College-Business Exchange program of the Foundation for Economic Education.

Rutledge Vining, professor of economics at the University of Virginia, was elected to the board of editors of publications of the Southern Economic Association at its last annual meeting. He read a paper at this meeting on "The Need for Regional Economic Analysis."

Gerald E. Warren, professor of economics at Tulane University, has been appointed district price executive of the Office of Price Stabilization.

Warren C. Waterhouse has been appointed assistant professor of institutional management at Mississippi State College.

Arthur M. Withehill, Jr., has been promoted to associate professor of business administration in the School of Business Administration at the University of North Carolina.

Herbert Willis has been appointed instructor in accounting at Southern University, Baton Rouge, La.

A. T. Wilson has returned to the Department of Business Administration at the Citadel after doing graduate work at the University of Minnesota.

Ralph S. Wofford, formerly of North Texas State College, has joined the Accounting Department at Mississippi State College as assistant professor of accounting.

James Womack, after receiving the MBA degree from the University of Mississippi, is now acting assistant professor of office administration in the same institution.

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The following names have been added to the membership of the Southern Economic Association:

Russell A. Altenberger, Economics Department, Tichenor Hall, Alabama Polytechnic Institute, Auburn, Ala.

Earl L. Bailey, Jr., Box 231, University of Mississippi, University, Miss.

L. M. Bauknight, Jr., Agricultural Economics Department, Clemson Agricultural College, Clemson, S. C.

P. Floyd Brookens, Box 5822, State College Station, Raleigh, N. C.

Terry M. Brookins, Box 142, Texas Southern University, Houston, Tex.

Walter S. Buckingham, Jr., Industrial Management Department, Georgia Institute of Technology, Atlanta, Ga.

Roger M. Clites, Box 47, 1701 Rose Avenue, Knoxville, Tenn.

Clive F. Dunham, School of Commerce and Business Administration, University of Mississippi, P. O. Box 461, University, Miss.

Edgar S. Dunn, Jr., Economics Department, University of Florida, Gainesville, Fla.

Howard S. Dye, Department of Economics, University of Tennessee, Knoxville, Tenn.

C. E. Fritschle, College of Business Administration, University of Tennessee, Knoxville, Tenn.

William M. Goulding, Economics Department, North Carolina State College, Raleigh, N. C.

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Financial Statement for Fiscal Year Ending October 31, 1951

Cash Balance, November 1, 1950			$916.52
Income:			
University of North Carolina Grants			
Grant Receivable for 1949–1950	$ 250.00		
Advance on Grant for 1951–1952	500.00		
Annual Grant for 1950–1951	2,000.00		
Total Grants		$2,750.00	
Southern Economic Association			
Annual Membership Subscriptions	1,479.00		
Institutional Subscriptions	8.00		
Student Subscriptions	22.50		
Total Association Subscriptions		1,509.50	
Institutional Annual Subscriptions to Journal		1,712.25	
Miscellaneous Sales of Journal		357.25	
Advertising			
Receivables for 1949–1950	340.00		
Current Fiscal Year	1,268.45		
Total Advertising		1,608.45	
Total Income			7,937.45
Total Cash Balance and Income			8,853.97
Expenses:			
Printing the Journal			
January issue	1,286.37		
April issue	1,412.50		
July issue	1,137.39		
October issue	1,571.35		
Total Journal Printing		$5,407.61	
Other Printing		15.00	
General Expense		64.02	
Postage, Telephone, and Telegraph		181.63	
Supplies		120.72	
Salaries		1,209.00	
Purchase of Back Copies of Journal		22.00	
Refunds		4.00	
Total Expenses			7,023.98
Balance, October 31, 1951			1,829.99
Balance Represents			
Cash Balance for 1950–1951		1,329.99	
UNC Advance on 1951–1952 Annual Grant		500.00	
			1,829.99

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November 1, 1950, *Cash on Hand*			$ 653.21
Receipts:			
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Student Memberships		30.00	
Institutional Memberships		20.00	
Dividend on Savings & Loan deposit		15.34	2,037.34
			$2,690.55
Expenditures:			
Expenses of the Association			
Postage	$ 47.75		
Printing	96.86		
Supplies	12.93		
Travel	77.06		
Miscellaneous	91.25	325.85	
Investment Account			
Dividend deposited	15.34	15.34	
The Southern Economic Journal		1,509.50	1,850.69
Cash on Hand, October 31, 1950			839.86
			$2,690.55

INVESTMENT ACCOUNT

Oct. 31, 1950—Balance on Deposit in First Federal Savings and Loan Association, Gainesville, Florida	$ 507.50
Dividend deposited	15.34
Balance, October 31, 1951	$ 522.84

FUND BALANCES

Checking Account, First National Bank, Gainesville, Fla	$ 839.86
Investment Account, First Federal Savings and Loan Association, Gainesville, Fla.	522.84
Total Association Funds, October 31, 1951	$1,362.70

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* * *

Program of the Twenty-first Annual Conference of the Southern Economic Association held at the Andrew Johnson Hotel in Knoxville, Tennessee, November 16–17, 1951

FRIDAY, NOVEMBER 16, 1951

9:00 A.M.—Meeting of the Executive Committee

10:00 A.M.—Morning Session

Chairman: Frank B. Ward, University of Tennessee

Topic: Monopoly and Economic Stability

1. Monopoly and Mobilization for Defense: Frank J. Kottke, Federal Trade Commission and University of North Carolina
2. The Economics and Politics of Group Behavior in Pricing and Allocating Resources: Ernst W. Swanson, Emory University

Discussion:

Harlan L. McCracken, Louisiana State University
Ralph H. Blodgett, University of Florida
David McCord Wright, University of Virginia
Joseph J. Spengler, Duke University

2:00 P.M.—Afternoon Session

Chairman: Albert S. Keister, Woman's College, University of North Carolina

Topic: Monetary-Fiscal Policies and Economic Stability

1. The Uses and Limitations of Monetary-Fiscal Policy in Economic Stabilization: Edward C. Simmons, Duke University
2. A Re-Examination of Keynesian Economics in the Light of Employment Experience since 1940: Clarence Philbrook, University of North Carolina

Discussion:

James M. Buchanan, Florida State University
Ralph M. Havens, University of Alabama
Howard R. Smith, University of Georgia
Rendings Fels, Vanderbilt University

6:00 P.M.—Dinner Meeting—Board of Editors and State Reporters of the Southern Economic Journal and Officers of the Association

8:00 P.M.—Evening Session

Chairman: James E. Ward, President of the Southern Economic Association, George Peabody College for Teachers

Topic: The Economics of Welfare

1. John R. Commons and the Welfare State: Abram L. Harris, University of Chicago
2. Modern Welfare Economics and Public Policy: Clark L. Allen, Florida State University

Discussion:

William H. Nicholls, Vanderbilt University
Lionel McKenzie, Duke University
George Sebba, University of Georgia

SATURDAY, NOVEMBER 17, 1951

9:00 A.M.—Annual Business Meeting

10:00 A.M.—Morning Session

I. Round Table on Problems in Business Management

Chairman: E. H. Anderson, University of Alabama

1. Management of our Universities: Henry G. Hodges, University of Florida
2. The Educational Need for Increasing Convergence of Management Theory and Practice: Thomas H. Carroll, University of North Carolina

Discussion:

T. W. Wood, State College, University of North Carolina
Roscoe Arant, Georgia Institute of Technology
William R. Spriegel, University of Texas
Edward G. Carnelius, Tennessee Polytechnic Institute

II. Round Table on Regional Economics

Chairman: Stefan H. Robock, Tennessee Valley Authority

1. The Need for Regional Economic Analysis: Rutledge Vining, University of Virginia
2. Current Developments in Regional Analysis: Walter Isard, Harvard University

Discussion:

Ben. U. Ratchford, Duke University
Werner Hochwald, Washington University
Howard Craven, Program Staff, Department of Interior
Robert W. French, Tulane University

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Operating Results of Limited Price Variety Chains in 1950. By Esther M. Love. Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1951. Pp. vi, 26. Paper, $2.00.

Manual for Statistics for Economics and Business. By Donald W. Paden and E. F. Lindquist. New York: McGraw-Hill Book Co., 1951. Pp. iii, 133. Paper, $2.00.

Financing Defense: Federal Tax and Expenditure Policies. By Albert G. Hart and E. Cary Brown. New York: Twentieth Century Fund, 1951. Pp. xiv, 161. $2.00.

American Monetary Policy. By E. A. Goldenweiser. New York: McGraw-Hill Book Co., 1951. Pp. xvi, 391. $4.50.

Sales Management: Policies and Procedures. By D. M. Phelps. Homewood, Ill.: Richard D. Irwin, 1951. Pp. xv, 902. $5.50.

The Works and Correspondence of David Ricardo. By Piero Sraffa and M. H. Dobb. Vols. I and II. New York: Cambridge University Press, 1951. Pp. lxii, 447 and xviii, 463. $4.75 per volume.

Industrial Internal Auditing. By W. A. Walker and W. R. Davies. New York: McGraw-Hill Book Co., 1951. Pp. vii, 329. $5.00.

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The National Economy in Time of Crisis: Its Meaning to Lawyers and their Clients. Newark: New Jersey State Bar Association, 1951, Pp. vii, 84.

One Hundred Short Problems in Corporation Finance. By Herbert E. Dougall and Harold W. Torgerson. 3rd ed. New York: Ronald Press Co., 1951. Pp. viii, 182. Paper, $2.00.

Outside Readings in Economics. By Arleigh P. Hess, Jr., and others. New York: Thomas Y. Crowell Co., 1951. Pp. xiii, 877. $2.75.

Urban Real Estate Markets: Characteristics and Financing. By Ernest M. Fisher. New York: National Bureau of Economic Research, 1951. Pp. xxi, 186. $3.00.

Business Cycles. By D. Hamberg. New York: Macmillan Co., 1951. Pp. xvii, 621. $5.00.

Economic Effects of Section 102: The Penalty Tax on Unreasonable Accumulation of Profits. Princeton, N. J.: Tax Institute, 1951. Pp. xxiii, 314. $5.00.

Domestic Control of Atomic Energy. By Robert A. Dahl and Ralph S. Brown, Jr. New York: Social Science Research Council, 1951. Pp. v, 117. Paper, $1.00.

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The Executive at Work. By Melvin T. Copeland. Cambridge: Harvard University Press, 1951. Pp. 278. $3.75.

Introduction to Business. By Raymond E. Glos and Harold A. Baker. 2nd ed. Chicago: South-Western Publishing Co., 1951. Pp. viii, 790. $4.75.

The International Economy. By John Parke Young. 3rd ed. New York: Ronald Press Co., 1951. Pp. xvi, 813. $5.50.

National Income and Product of the United States, 1929–1950. Washington: Government Printing Office, 1951. Pp. vi, 216. Paper, $1.00.

Statistical Methodology Reviews, 1941–1950. Edited by Oscar Krisen Buros. New York: John Wiley & Sons, 1951. Pp. 457. $7.00.

Mobilizing Resources for War: The Economic Alternatives. By Tibor Scitovsky and others. New York: McGraw-Hill Book Co., 1951. Pp. x, 284. $4.50.

Changing Perspectives in Marketing. Edited by Hugh G. Wales. Urbana: University of Illinois Press, 1951. Pp. xi, 292. $4.00.

Public Finance in a Developing Country: El Salvador—A Case Study. By Henry C. Wallich and John H. Adler. Cambridge: Harvard University Press, 1951. Pp. xviii, 346. $6.00.

Welfare and Competition: The Economics of a Fully Employed Economy. By Tibor Scitovsky. Homewood, Ill.: Richard D. Irwin, 1951. Pp. xvi, 457. $5.50.

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Economic Mobilization and Stabilization: Selected Materials on the Economics of War and Defense. Edited by Lester V. Chandler and Donald H. Wallace. New York: Henry Holt & Co., 1951. Pp. xi, 610. $4.50.

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Manpower Resources and Utilities: Principles of Working Force Analysis. By A. J. Jaffe and Charles D. Stewart. New York: John Wiley & Sons, 1951. Pp. xii, 532. $6.50.

Compulsory Labor Arbitration in France, 1936–1939. By Joel Colton. New York: King's Crown Press, 1951. Pp. xvi, 220. $3.25.

El Plan Hallesint. By Nicolas Manetti Cusa. Buenos Aires, Brazil: Movimiento Hallesista Internacional. Pp. 40. Paper, 30 cents.

The Economy of Turkey: An Analysis and Recommendations for a Development Program. Washington, D. C.: International Bank for Reconstruction and Development, 1951. Pp. xxv, 276. $5.00.

An Economic Approach to Antitrust Problems. By Clare E. Griffin. New York: American Enterprise Association, 1951. Pp. xiv, 95. Paper, $1.00.

Rural Levels of Living in Lee and Jones Counties, Mississippi, 1945, and a Comparison of Two Methods of Data Collection. By Barbara B. Reagan and Evelyn Grossman. Washington, D. C.: Superintendent of Documents, 1951. Pp. vii, 164. Paper, 40 cents.

Turkey: Economic and Commercial Conditions in Turkey. By T. G. A. Muntz. New York: Philosophical Library, 1951. Pp. x, 194. Paper, $4.75.

Schumpeter, Social Scientist. Edited by Seymore E. Harris. Cambridge: Harvard University Press, 1951. Pp. x, 142. $4.00.

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